

# **MidAmerican Energy Company**

2024-2028 Energy Efficiency and

Demand Response Plan

Application Exhibit 1

Submitted to:

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## 1. Executive Summary

MidAmerican Energy Company (“MidAmerican”) hereby submits its proposed 2024-2028 Energy Efficiency and Demand Response Plan (“Plan”) in accordance with the requirements set forth in Chapter 35 of the Iowa Administrative Code (IAC). MidAmerican’s Plan builds on its 2019-2023 plan and will continue to provide a comprehensive portfolio of energy efficiency programs during the five-year period from 2024 to 2028. The Plan offers customers in every sector the flexibility to participate at many levels, based on their individual needs and building type.

### 1.1. General Description

MidAmerican’s Plan is sensitive to the reality that many of its residential and nonresidential customers find themselves in more financial uncertainty than ever before due to the recent COVID-19 pandemic and the subsequent economic downturn. As such, MidAmerican expects to face notable challenges during the upcoming plan cycle, including inflationary cost increases, increasing market saturation, and the adoption of new equipment standards.

The recent passage of the Inflation Reduction Act (IRA) will help promote energy efficiency and decarbonization at a time when high prices and an unstable economy make investing in energy efficiency ever more important. As federal requirements for energy efficiency increase, such as increased lighting baselines and appliance efficiency standards, MidAmerican sees a need to innovate and strategize in this plan cycle. This includes investigating ways to optimize the use of federal funding in coordination with MidAmerican’s energy efficiency programs and innovating new plan offerings.

The increasing baseline efficiency of equipment and buildings is a success story, but it also reduces MidAmerican’s claimable energy savings. In addition, MidAmerican’s significant and growing renewable energy portfolio and its goal of achieving 100 percent renewable generation brings unique challenges and impacts to programs and measures included in the Plan, such as reduced avoided energy costs and greater inclusion of electric measures that result in significant peak savings.

Educating customers on the importance of energy efficient technologies will be critical to our success and will involve strategic planning and outreach. These efforts will result in increased costs to achieve our goals and will require a continued dedication to innovation and recommitment to a shared vision of reduced energy demand.

The Plan includes new program offerings like Retro-Commissioning and Strategic Energy Management for nonresidential customers to capture untapped market potential. New program

delivery channels such as an online marketplace and midstream incentives for residential and nonresidential products will potentially increase participation by making incentive processes more streamlined for all of MidAmerican's customers.

Table 1 summarizes the programs included in the Plan, as well as program components and target markets (by fuel).

*Table 1 Summary of Iowa Plan Programs*

Program	Components	Fuel	
		Electric	Natural Gas
Residential			
Residential Equipment	Instant Discounts Online Marketplace Prescriptive Incentives	X	X
Residential Assessment	Online Home Energy Assessment	X	X
Residential Behavioral	Home Energy Reports	X	
Residential Appliance Recycling		X	
Residential Low Income	Statewide Weatherization Supplemental Weatherization Home Energy Reports	X	X
Nonresidential			
Nonresidential Equipment	Instant Discounts Prescriptive Incentives	X	X
Nonresidential Energy Solutions	Small Business Express Direct Project Assistance Retro-Commissioning Strategic Energy Management	X	X
Commercial New Construction		X	X
Nonresidential Low Income	Income Qualified Multifamily Affordable Multifamily New Construction	X	X
Multi-Sector and Other			
Trees		X	X
Education	Schools Outreach General Program Awareness Trade Ally Outreach/Education Business Energy Reports	X	X

Demand Response			
Residential Load Management	Bring Your Own Thermostat Load Control Receivers	X	
Nonresidential Load Management	Curtailment	X	

## 1.2. Plan and Schedule Changes

MidAmerican plans to implement this Plan no later than January 1, 2024, pending Board approval. Several of the programs described in this Plan are already in place and operational. MidAmerican will collaborate with current and prospective contractors to minimize the transition period.

Table 2 summarizes the changes to MidAmerican's 2019-2023 plan that are included in the proposed 2024-2028 plan.

*Table 2 Proposed Plan Changes Compared to 2019-2023 Plan*

Program	Markets Served	Changes/Details
<b>Discontinued Programs / Initiatives</b>		
Residential Assessment	Residential	Energy Efficiency Kit
Residential Low Income	Residential	Partnership with Green Iowa AmeriCorps
<b>Enhancements and Changes to Existing Programs</b>		
Residential Equipment	Residential	<p>Incorporating new incentive delivery models including midstream, online marketplace and retail</p> <p>New measures include:</p> <ul style="list-style-type: none"> <li>• Ground source heat pump</li> <li>• Tune-ups</li> <li>• ENERGY STAR certified <ul style="list-style-type: none"> <li>○ Heat pump water heater</li> <li>○ Clothes washer</li> <li>○ Clothes dryer</li> <li>○ Refrigerator</li> <li>○ Freezer</li> <li>○ Air purifier</li> </ul> </li> <li>• Low flow showerhead</li> <li>• Low flow aerator</li> <li>• Advanced power strip</li> </ul>



Program	Markets Served	Changes/Details
Residential Behavioral	Residential	Adding 60,000 new customers  Increasing report cadence to four reports per year for the top 25 percent energy users
Nonresidential Equipment	Nonresidential	Incorporating new midstream incentive delivery model  New measures include: <ul style="list-style-type: none"> <li>• Ground source heat pump</li> <li>• Tune-ups</li> <li>• Commercial kitchen equipment</li> </ul>
Nonresidential Energy Solutions	Nonresidential	Adding Strategic Energy Management and Retro-commissioning initiatives
Commercial New Construction	Nonresidential	Natural gas incentives  New offerings including Streamlined and Enhanced services
Nonresidential Low Income	Nonresidential	Formerly Income Qualified Multifamily, this program has been renamed to allow multiple low-income initiatives including: <ul style="list-style-type: none"> <li>• Affordable Multifamily New Construction</li> <li>• Enhanced incentives for low income or underserved communities and small business</li> </ul>
Nonresidential Education	Nonresidential	Adding Energy Reports for small business
Residential Load Management	Residential	New SummerSaver participants will be enrolled with a smart thermostat. Load control receivers will no longer be offered.  Incentive for smart thermostat participation will increase from \$30 per season to \$40 per season to encourage participation
Nonresidential Load Management	Nonresidential	Adding a summer-only participation option with an incentive of \$30/kW  Increasing the incentive for year-round participation to \$60/kW

MidAmerican recognizes that aspects of this Plan may require adjustments due to the implementation of the state grant programs included in the IRA. MidAmerican is committed to collaborating with the Office of Consumer Advocate and other interested parties to address any significant changes to this Plan through the regulatory approval process, the modification process as outlined in 199 IAC Chapter 35, or annual program updates.

## 2. Assessment of Potential Summary

The 199 IAC Chapter 35 sets forth the rules that require Iowa's investor-owned utilities (IOUs) to "conduct an assessment of potential study to determine the cost-effective energy and capacity savings available from actual and projected customer usage by applying commercially available technology and improved operating practices to energy-using equipment and buildings." (199 IAC 35.4(476)).

In compliance with this requirement, the Iowa Utility Association, of which MidAmerican is a member, commissioned a statewide assessment of the remaining electric and natural gas energy efficiency and demand response potentials within the service territories of Iowa's three largest IOUs. The Assessment of Iowa's Energy Efficiency Potential ("Assessment") quantified the amount of energy that could be saved in each utility's service territory from 2024 through 2028 from efficient technologies and practices that are widely commercially available, accounting for known changes in codes and standards and other market trends. For both energy efficiency and demand response, the study team analyzed three potential scenarios which assume increasingly expanded programs. The three scenarios for energy efficiency and demand response are described below:

- Energy efficiency scenarios
  - Reference Existing: includes existing programs that are currently active
  - Reference New: includes new measures added to existing programs
  - High Case: includes new programs and expanded existing programs
- Demand response scenarios
  - Reference Existing: includes existing programs that are currently active
  - Reference New: includes existing and new programs with realistic participation
  - High Case: includes an aggressive level of participation for new and existing programs

Table 3 shows the cumulative energy savings potential, demand reduction potential in 2028, and associated costs for each scenario in MidAmerican's service area. The Assessment results indicate 822 GWh of estimated electric energy efficiency program potential and over 14.1 million therms of estimated natural gas savings potential by the end of the five-year planning horizon in 2028 in the High Case scenario.

*Table 3 Electric and Natural Gas Energy Savings and Demand Reduction Potential (2024-2028)*

Potential Scenarios	Study	Cumulative Energy Savings <sup>1</sup>		2028 Demand Reduction (MW)	Budget Million Dollars
		Electricity (GWh)	Natural Gas (Therms)		
Reference Existing		434	6,949,783	493	\$182.1
Reference New		475	8,565,595	506	\$197.9
High Case		822	14,136,347	595	\$312.6

### 3. Plan Overview

#### 3.1. Budget

Anticipated five-year spending for the Plan is shown in Table 4. MidAmerican proposes a budget of nearly \$356 million in energy efficiency (EE) and demand response (DR) programs over the five-year period. MidAmerican's accounting systems ensure that costs for providing the programs are appropriately recovered from customers.

*Table 4 Budget for Energy Efficiency and Demand Response Plan*

Total Electric Spending	Administrative Cost	Incentive Cost	Total Cost
2024	\$13,304,279	\$47,457,614	\$60,761,893
2025	\$14,496,510	\$47,714,030	\$62,210,540
2026	\$15,735,638	\$48,787,182	\$64,522,820
2027	\$15,285,917	\$50,581,496	\$65,867,413
2028	\$15,431,728	\$51,687,146	\$67,118,874
Total	\$74,254,071	\$246,227,469	\$320,481,540
EE Electric Spending	Administrative Cost	Incentive Cost	Total Cost
2024	\$11,655,279	\$29,846,324	\$41,501,603
2025	\$12,746,610	\$30,005,790	\$42,752,400
2026	\$13,536,488	\$30,981,992	\$44,518,480
2027	\$13,233,017	\$32,679,356	\$45,912,373
2028	\$13,365,328	\$33,688,056	\$47,053,384
Total	\$64,536,721	\$157,201,519	\$221,738,240

<sup>1</sup> Cumulative savings do not include savings for measures that reach the end of their useful life and are reinstalled in the Plan period; therefore, the cumulative savings do not equal the sum of each year's savings.

<b>DR Electric Spending</b>	<b>Administrative Cost</b>	<b>Incentive Cost</b>	<b>Total Cost</b>
2024	\$1,649,000	\$17,611,290	\$19,260,290
2025	\$1,749,900	\$17,708,240	\$19,458,140
2026	\$2,199,150	\$17,805,190	\$20,004,340
2027	\$2,052,900	\$17,902,140	\$19,955,040
2028	\$2,066,400	\$17,999,090	\$20,065,490
Total	\$9,717,350	\$89,025,950	\$98,743,300
<b>Gas Spending</b>	<b>Administrative Cost</b>	<b>Incentive Cost</b>	<b>Total Cost</b>
2024	\$1,918,631	\$4,704,512	\$6,623,144
2025	\$2,066,718	\$4,856,141	\$6,922,859
2026	\$2,191,684	\$4,959,310	\$7,150,995
2027	\$2,217,612	\$5,128,120	\$7,345,733
2028	\$2,184,947	\$5,164,082	\$7,349,029
Total	\$10,579,593	\$24,812,166	\$35,391,759
<b>Combined Plan Spending</b>	<b>Administrative Cost</b>	<b>Incentive Cost</b>	<b>Total Cost</b>
2024	\$15,222,910	\$52,162,126	\$67,385,036
2025	\$16,563,227	\$52,570,171	\$69,133,399
2026	\$17,927,322	\$53,746,492	\$71,673,814
2027	\$17,503,529	\$55,709,617	\$73,213,146
2028	\$17,616,675	\$56,851,228	\$74,467,903
Total	\$84,833,664	\$271,039,635	\$355,873,298

In this filing, MidAmerican provides budget estimates for each program and year based on estimates of participation and incentive levels for each measure offered in each program. For any program and any year, participation and spending may vary substantially from the estimates for a variety of reasons beyond MidAmerican's control. In total, MidAmerican's plan assumes 16 full time equivalent staff persons will be dedicated to delivering the Plan at a total labor cost of \$11,123,361. Detailed budgets by spending category and staffing assumptions in full-time employee equivalents for each program are provided in Application Exhibit 4 Budget Accounting for Costs.

### 3.2. Energy Savings

By 2028, MidAmerican anticipates helping customers install energy efficiency measures or make energy saving behavior changes that are expected to reduce MidAmerican's annual energy requirements by nearly 1.8 million therms of natural gas and over 1 billion kilowatt-hours (kWh)

of electricity. Summer peak electric demand for Iowa customers is also expected to be reduced by over 433,000 kilowatts (kW). Table 5 provides the anticipated savings levels for the 2024-2028 Plan.

*Table 5 Energy Savings for Energy Efficiency and Demand Response Plan*

Total Electric Savings	Annual kWh	Peak kW
2024	208,092,961	379,434
2025	207,327,211	391,964
2026	209,447,651	405,164
2027	219,020,186	419,453
2028	224,215,742	433,415
Total	1,068,103,751	N/A
EE Electric Savings	Annual kWh	Peak kW
2024	207,059,511	51,568
2025	206,246,212	51,398
2026	208,319,101	51,898
2027	217,844,087	53,487
2028	222,992,092	54,749
Total	1,062,461,003	N/A
DR Electric Savings	Annual kWh	Peak kW
2024	1,033,450	327,866
2025	1,081,000	340,566
2026	1,128,550	353,266
2027	1,176,100	365,966
2028	1,223,650	378,666
Total	5,642,748	N/A
Gas Savings	Annual Therms	Peak Therms
2024	1,713,638	22,584
2025	1,752,195	23,054
2026	1,728,477	22,913
2027	1,811,740	23,406
2028	1,800,625	23,530
Total	8,806,676	N/A

MidAmerican has established annual combined electricity savings targets ranging from 0.73 to 0.76 percent of its participating customer retail sales forecast.

### 3.3. Cost Effectiveness

Anticipated total net economic benefits of the Plan based on the Societal Cost Test (SCT) are outlined in Table 6.

*Table 6 Cost Effectiveness for Energy Efficiency and Demand Response Plan (SCT)*

Program	Electric	Gas	Total
Program Benefits	\$1,773,091,256	\$110,912,369	\$1,884,003,625
Program Costs	\$415,938,463	\$72,984,956	\$488,923,418
Net Economic Benefits	\$1,357,152,793	\$37,927,414	\$1,395,080,206
SCT Ratio	4.26	1.52	3.85

Overall, the programs are expected to create net benefits to Iowa's customers of approximately \$1.3 billion. The benefit-cost ratio for the total portfolio of programs is 3.85.

That translates to lowering energy supply costs by \$3.85 for every dollar invested in MidAmerican's energy efficiency programs.

Anticipated total net economic benefits of the Plan based on the Ratepayer Impact Measure (RIM) test are outlined in Table 7.

*Table 7 Cost Effectiveness for Energy Efficiency and Demand Response Plan (RIM)*

Program	EE Electric	DR Electric	EE Gas	Total
Program Benefits	\$746,113,407	\$284,786,337	\$58,027,517	\$1,088,927,261
Program Costs	\$770,773,674	\$86,690,455	\$92,007,641	\$949,471,760
Net Economic Benefits	\$(24,660,267)	\$198,095,891	\$(33,980,124)	\$139,455,500
RIM Ratio	0.97	3.29	0.63	1.15

### 3.4. Plan Organization

The remainder of this exhibit provides additional details on the Plan programs and their expected results. After this introduction, the report includes the following:

- Residential energy efficiency program descriptions
- Nonresidential energy efficiency program descriptions
- Multi-sector and other program descriptions
- Demand response program descriptions

- Support services required to deliver the programs, including monitoring and evaluation plans

## 4. Residential Energy Efficiency Programs

### 4.1. Residential Equipment

The Residential Equipment program promotes the purchase of energy efficient equipment by residential customers in new and existing homes. The program provides customers with incentives to offset the higher purchase cost of efficient equipment. Targeted equipment includes heating and cooling measures, smart thermostats, and appliances. Program measures must save energy supplied directly by MidAmerican.

The program is available to all residential customers and landlords for both new and existing buildings in MidAmerican's Iowa service territory. Residential equipment installed in newly constructed, single-family homes and duplexes is eligible for incentives through the Residential Equipment program. Residential equipment installed in newly constructed multifamily homes (three or more units) is not eligible for incentives through the Residential Equipment program. However, MidAmerican's Commercial New Construction program provides services and incentives for new multifamily homes. MidAmerican estimates the total number of customers eligible to participate in the Residential Equipment program is 760,000. Table 8 outlines the customer eligibility requirements.

*Table 8 Residential Equipment Customer Eligibility Parameters*

	Electric Measures	Natural Gas Measures
<b>Customer Class</b>	Residential electric rate	Residential natural gas rate
<b>Customer Status</b>	Customer homeowners and landlords	Customer homeowners and landlords
<b>Building Type – Existing</b>	Single-family; Duplex; Multifamily; Manufactured home	Single-family; Duplex; Multifamily; Manufactured home
<b>Building Type – New Construction</b>	Single-family; Duplex; Manufactured home	Single-family; Duplex; Manufactured home
<b>Building Size</b>	N/A	N/A
<b>Geography</b>	MidAmerican Iowa electric service area	MidAmerican Iowa natural gas service area

Customers participating in the program receive three main benefits:

- Customers save money in the short term through incentives and in the long term through lower utility bills
- Customers receive information about high quality, energy efficient equipment from a professional source
- Equipment incentives are accessible to any eligible customer for qualifying equipment

#### 4.1.1. Measures and Incentives

The Residential Equipment program offers financial incentives to participants in the form of downstream, midstream, and upstream incentives. Incentives are offered on a per measure basis to program participants installing qualifying equipment. For some equipment, the incentive will be a fixed amount per measure; for other equipment, the incentive will increase with increasing equipment efficiency.

Table 9 presents the qualifying efficiency and incentives available for measures included in the program.

*Table 9 Residential Equipment Incentives by Measure*

Measure	Qualification	Estimated Incentive Amount
<b>Heating and Cooling Equipment</b>		
Air source heat pump	ENERGY STAR, AHRI certified	\$240 to \$925 per unit
Ductless mini-split heat pump	ENERGY STAR, AHRI certified	\$240 to \$925 per unit
Ground source heat pump	ENERGY STAR, AHRI certified	\$2,000 per unit
Central air conditioner	ENERGY STAR, AHRI certified	\$90 to \$610 per unit
Natural gas furnace	ENERGY STAR, AHRI certified	\$125 per unit
<b>Heating and Cooling Tune-Up</b>		
Air-source heat pump	One tune-up per customer, per plan	\$225 per customer
Boiler	One tune-up per customer, per plan	\$450 per customer
Central air conditioner	One tune-up per customer, per plan	\$225 per customer
Natural gas furnace	One tune-up per customer, per plan	\$135 per customer



Measure	Qualification	Estimated Incentive Amount
Smart Thermostat	ENERGY STAR certified	\$100 per unit
<b>Advanced Thermostat</b>		
Smart Thermostat	ENERGY STAR certified	\$100 per unit
<b>Other Equipment</b>		
Air purifier	ENERGY STAR certified	\$20 per unit
Clothes dryer	ENERGY STAR certified	\$35 per unit
Clothes washer	ENERGY STAR certified	\$45 per unit
Freezer	ENERGY STAR certified	\$25 per unit
Refrigerator	ENERGY STAR certified	\$50 per unit
Heat pump water heater	ENERGY STAR certified	\$600 per unit
Low-flow aerator	WaterSense certified	\$3 per unit
Low-flow showerhead	WaterSense certified	\$14 per unit
Advanced power strip	Tier 1	\$9 per unit

MidAmerican offers incentives for the current program year until approved funds are exhausted or until December 31 of each program year, whichever comes first. MidAmerican performs an annual review of qualifying measures, incentive levels and performance criteria and may adjust measures, eligibility requirements, and incentives as market conditions change and equipment standards change. This may include temporary reduction or suspension of incentives to appropriately manage program costs.

#### 4.1.2. Budgets

Anticipated five-year spending for the Residential Equipment program is provided in Table 10.

*Table 10 Residential Equipment Budget*

Electric Spending	Administrative Cost	Incentive Cost	Total Cost
2024	\$2,203,047	\$6,461,363	\$8,664,410
2025	\$2,288,679	\$6,567,276	\$8,855,955
2026	\$2,375,408	\$6,765,156	\$9,140,563
2027	\$2,427,788	\$7,075,138	\$9,502,926
2028	\$2,448,479	\$7,227,598	\$9,676,077
Total	\$11,743,401	\$34,096,531	\$45,839,932

Gas Spending	Administrative Cost	Incentive Cost	Total Cost
2024	\$623,106	\$1,849,069	\$2,472,174
2025	\$635,223	\$1,860,905	\$2,496,128
2026	\$635,839	\$1,861,687	\$2,497,526
2027	\$635,180	\$1,884,875	\$2,520,055
2028	\$638,590	\$1,896,665	\$2,535,255
Total	\$3,167,937	\$9,353,201	\$12,521,138

  

Total Spending	Administrative Cost	Incentive Cost	Total Cost
2024	\$2,826,153	\$8,310,432	\$11,136,584
2025	\$2,923,902	\$8,428,182	\$11,352,083
2026	\$3,011,247	\$8,626,843	\$11,638,089
2027	\$3,062,968	\$8,960,013	\$12,022,981
2028	\$3,087,069	\$9,124,263	\$12,211,332
Total	\$14,911,338	\$43,449,732	\$58,361,070

Detailed budgets by spending category and staffing assumptions in full-time employees (FTEs) for this program are provided in Application Exhibit 4 Budget Accounting for Costs.

#### 4.1.3. Energy Savings

Anticipated energy savings for the Residential Equipment program are provided in Table 11.

*Table 11 Residential Equipment Energy Savings*

Electric Savings	Annual kWh	Peak kW
2024	11,474,138	2,459
2025	11,597,264	2,542
2026	11,908,884	2,659
2027	11,612,364	1,986
2028	11,726,958	2,012
Total	58,319,607	N/A

Gas Savings	Annual Therms	Peak Therms
2024	1,103,763	17,251
2025	1,094,803	17,129
2026	1,071,759	16,764
2027	1,073,161	16,796
2028	1,074,562	16,829
Total	5,418,048	N/A

#### 4.1.4. Participation

Participation estimates for each measure offered in this program are provided in Application Exhibit 7 Measure Level Details.

#### 4.1.5. Cost Effectiveness

Anticipated total net economic benefits of the program are provided in Table 12.

*Table 12 Residential Equipment Cost Effectiveness*

Program	Electric	Gas	Total
Program Benefits	\$76,345,259	\$74,126,528	\$150,471,787
Program Costs	\$53,019,556	\$46,173,473	\$99,193,029
Net Economic Benefits	\$23,325,703	\$27,953,055	\$51,278,758
Societal Test Ratio	1.44	1.61	1.52

#### 4.1.6. Operations

The Residential Equipment program provides prescriptive incentives to customers who purchase qualifying energy efficient equipment. The program is delivered in partnership with heating and cooling distributors as well as retail outlets selling qualifying equipment. Equipment incentives are delivered using one or a combination of incentive delivery models which includes:

- Downstream: MidAmerican will offer a limited number of downstream incentives for prescriptive residential measures.
- Midstream: The majority of incentives will be offered through the midstream delivery model where MidAmerican will work directly with equipment distributors to incentivize the stocking and selling of high-efficiency equipment.

- Upstream: MidAmerican will introduce an online marketplace to offer instant incentives for select products. Additionally, MidAmerican will work with retail partners to offer instant discounts either on the shelf or through a bar-coded coupon for select equipment.

MidAmerican staff provides overall strategic direction for the program and conducts research and development, promotion, trade ally support, evaluation, and other administrative functions.

The program is delivered through the assistance of program contractors that handle processing applications, tracking program data, answering questions from dealers and customers, verifying equipment installations, and coordinating incentive distribution to customers. MidAmerican currently contracts with Resource Innovations and DNV Energy Services for management and administrative services of downstream and midstream incentives, respectively. MidAmerican will be actively seeking a program contractor to implement the upstream component of this program. MidAmerican regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process. MidAmerican will issue a request for proposal in 2023 for this program.

#### 4.1.7. Market Barriers

Table 13 presents the key market barriers to an effective Residential Equipment program and strategies the program uses to address each barrier. These program strategies may only partially offset the identified barriers.

*Table 13 Residential Equipment Market Barriers and Strategies*

Market Barriers	Program Strategies
Higher first cost of energy efficient equipment	Offer incentives Educate customers on the long-term energy cost-saving benefits of higher efficiency equipment Support leveraging additional funds through state and federal funding
Customers not aware of qualifying products, incentive or providers	Trade ally training to help customers quickly identify appropriate products Provide in-store and trade ally marketing material Market program and general efficiency awareness to customers

Market Barriers	Program Strategies
Trade allies not marketing high-efficiency equipment	Provide trade ally training and outreach to explain the benefits of selling high-efficiency equipment Encourage participation in the midstream incentive delivery model Market program and general efficiency awareness to trade allies
Customers don't understand long-term value of high-efficiency equipment	Train trade allies to explain life-cycle costs to customers Market program and general efficiency awareness to customers Provide efficiency education to customers
Equipment distributors are unaware of program	Provide outreach and marketing to equipment distributors

#### 4.1.8. Marketing and Promotion

MidAmerican will target residential customers using traditional and nontraditional marketing channels and provide education and outreach to customers, trade allies, retailers, and industry organizations to encourage customer participation and implementation of energy efficient measures and equipment. MidAmerican will engage in a multifaceted promotional strategy, including:

- Direct outreach through a network of trade allies
- Direct outreach for specific equipment incentive promotions/campaigns
- Ongoing trade ally education about program procedures and benefits, qualifying measures, and incentive structures
- Program promotion at industry, community, and organization/association events
- Periodic articles in MidAmerican's monthly customer electronic newsletter and its quarterly newsletter sent with customer bills
- A dedicated webpage that includes program information, qualification requirements and available incentives
- Utilization of social media channels
- Referrals by MidAmerican's call center

Trade allies play a key role in implementing the program. To support its trade allies and keep them informed of program opportunities and changes, MidAmerican's energy efficiency website assists trade allies in marketing and delivering energy efficient products and services to customers, while encouraging energy efficiency program participation. MidAmerican's Trade Ally

Central website offers trade allies the opportunity to download program materials, learn about program changes, and provide contact information for future communications. MidAmerican will periodically provide program information and training through a variety of different communication modes to create overarching energy efficiency and program awareness among our customers and trade allies. Further information regarding trade allies is in section 6.1 Education.

Any business that sells or installs equipment to MidAmerican customers may participate in the program. The following types of trade allies are predominant:

- Heating and cooling distributors and installing contractors
- Plumbing and mechanical contractors
- Retail outlets

MidAmerican will regularly review and update customer-facing program information and marketing materials as part of its internal program evaluation process, and adjust materials as needed based on program adjustments and market characteristics.

#### 4.2. Residential Assessment

The Residential Assessment program promotes energy efficiency strategies for existing residential customers through an online home energy assessment. The online home energy assessment gives all residential customers access to an interactive home assessment. This online tool is a simple home survey that asks customers questions to determine the source of their greatest energy use. Customers also receive personalized energy tips, usage history and information on other energy efficiency programs that may be relevant. The program is marketed under the registered trademark name HomeCheck®.

This program is available to all residential customers, including apartment dwellers, who receive electric and/or natural gas service from MidAmerican. MidAmerican estimates the total number of customers eligible to participate in the Residential Assessment program is 760,000. Table 14 outlines the customer eligibility requirements.

*Table 14 Residential Assessment Customer Eligibility Parameters*

	Electric Measures	Natural Gas Measures
<b>Customer Class</b>	Residential electric rate	Residential natural gas rate
<b>Customer Status</b>	All residential customers	All residential customers
<b>Building Type – Existing</b>	Single-family; Multifamily; Manufactured home	Single-family; Multifamily; Manufactured home

	Electric Measures	Natural Gas Measures
<b>Building Type – New Construction</b>	Single-family; Multifamily; Manufactured home	Single-family; Multifamily; Manufactured home
<b>Building Size</b>	N/A	N/A
<b>Geography</b>	MidAmerican Iowa electric service area	MidAmerican Iowa natural gas service area

Customers participating in the program receive three main benefits:

- Convenient online home energy assessment that provides customized energy reduction recommendations
- Additional information regarding energy saving tips and other energy efficiency programs
- Heightened awareness of the relationship between energy usage decisions made in the home and the amount of energy used, and the cost of this energy on monthly utility bills

#### 4.2.1. Measures and Incentives

The Residential Assessment program offers financial incentives for the following measure:

- Online home energy assessment available at no cost to MidAmerican Iowa residential customers

#### 4.2.2. Budgets

Anticipated five-year spending for the Residential Assessment program is provided in Table 15.

*Table 15 Residential Assessment Budget*

Electric Spending	Administrative Cost	Incentive Cost	Total Cost
2024	\$48,459	\$122,500	\$170,959
2025	\$88,628	\$122,500	\$211,128
2026	\$49,642	\$122,500	\$172,142
2027	\$49,642	\$122,500	\$172,142
2028	\$47,388	\$122,500	\$169,888
Total	\$283,759	\$612,500	\$896,259

Gas Spending	Administrative Cost	Incentive Cost	Total Cost
2024	\$20,195	\$52,500	\$72,695
2025	\$25,431	\$52,500	\$77,931
2026	\$20,652	\$52,500	\$73,152
2027	\$20,652	\$52,500	\$73,152
2028	\$20,171	\$52,500	\$72,671
Total	\$107,101	\$262,500	\$369,601
Total Spending	Administrative Cost	Incentive Cost	Total Cost
2024	\$68,654	\$175,000	\$243,654
2025	\$114,059	\$175,000	\$289,059
2026	\$70,294	\$175,000	\$245,294
2027	\$70,294	\$175,000	\$245,294
2028	\$67,559	\$175,000	\$242,559
Total	\$390,860	\$875,000	\$1,265,860

Detailed budgets by spending category and staffing assumptions in FTEs for this program are provided in Application Exhibit 4 Budget Accounting for Costs.

#### 4.2.3. Energy Savings

There are no electric or gas savings associated with this program.

#### 4.2.4. Cost Effectiveness

Anticipated total net economic benefits of the program are provided in Table 16.

*Table 16 Residential Assessment Cost Effectiveness*

Program	Electric	Gas	Total
Program Benefits	\$0	\$0	\$0
Program Costs	\$859,341	\$354,126	\$1,213,467
Net Economic Benefits	(\$859,341)	(\$354,126)	(\$1,213,467)
Societal Test Ratio	-	-	-

#### 4.2.5. Operations

The Residential Assessment program is the primary entry point for participation by MidAmerican residential customers in its energy efficiency programs. The online home energy assessment is delivered by a program contractor who hosts the online assessment tool.



MidAmerican provides weekly customer data uploads to the program contractor to improve the accuracy of the assessment. Customers can further improve the accuracy of the assessment by completing their home profile. Key steps in the implementation of the Residential Assessment program are as follows:

- Website development: The program contractor and MidAmerican will build and customize the online assessment website for Iowa customers. The website will be embedded into the MidAmerican website for easy customer access.
- Provide data: MidAmerican supplies the program contractor with weekly data feeds for all Iowa residential customers to ensure energy usage information shown on the home energy assessment matches the energy usage information shown on the customer bill.
- Assessment completion: The customer completes a home profile to receive customized energy efficiency tips, recommendations for other MidAmerican programs, and the opportunity to set an energy savings goal.
- Manage operations: MidAmerican's call center answers participant questions by phone and email. The call center also updates home profiles with the customer on the phone by accessing the Customer Service Representative Web Portal.

MidAmerican staff provides overall strategic direction for the program, as well as conducts research and development, promotion, evaluation, and other administrative functions.

MidAmerican uses program contractors to help deliver the program. The contractors handle product quality and availability, customer eligibility, delivery of services and data reporting. MidAmerican currently contracts with Oracle/Opower for program delivery of the online home energy assessment. MidAmerican regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process. MidAmerican will issue a request for proposal in 2023 for this program.

#### 4.2.6. Market Barriers

Table 17 presents the key market barriers to an effective Residential Assessment program and strategies the program uses to address each barrier. These program strategies may only partially offset the identified barriers.

*Table 17 Residential Assessment Market Barriers and Strategies*

Market Barriers	Program Strategies
Lack of customer awareness	Provide marketing and outreach to individual customers Provide efficiency education Embed online assessment in MidAmerican's website so a customer has access when they login to their account
No Internet or lack of technical skills to complete the assessment	Provide call center support

#### 4.2.7. Marketing and Promotion

MidAmerican will target residential customers using traditional and nontraditional marketing channels including:

- Program promotion at industry, community, and organization/association events
- Periodic articles in MidAmerican's monthly electronic newsletter and its quarterly newsletter sent with customer bills
- A dedicated webpage that includes program information
- Utilization of social media channels
- Referrals by MidAmerican's call center

#### 4.3. Residential Behavioral

The Residential Behavioral program is designed to encourage electric energy savings through behavioral modification. The program provides customers with Home Energy Reports that contain personalized information about their energy use and offers helpful ways to make their homes more efficient. Customers are randomly selected to receive Home Energy Reports but may opt out if they do not wish to participate. The Home Energy Reports compare the customer's energy usage to 100 statistically similar homes in their area. The reports engage customers and lead them to take action to bring their energy usage in line with similar homes.

The Residential Behavioral program empowers customers to better understand their energy usage and act on this knowledge, resulting in changed customer behavior. Additionally, the program provides customers' recommendations to lower their energy usage and encourages participation in other programs most applicable to them by using the Home Energy Report as a promotional vehicle. By helping customers become more energy efficient and lower their utility bills, the program will help customers understand that decisions they make regarding energy usage are important and relevant to their total monthly utility bill.

Customer targets include Iowa residential customers that receive both electric and natural gas service or only electric (all electric homes) from MidAmerican. MidAmerican estimates the total number of customers eligible to participate in the Residential Behavioral program is 380,000. Table 18 outlines the customer eligibility requirements.

*Table 18 Residential Behavioral Customer Eligibility Parameters*

	Electric Measures	Natural Gas Measures
<b>Customer Class</b>	Residential electric rate	N/A
<b>Customer Status</b>	Customer homeowners; apartment dwellers	N/A
<b>Building Type – Existing</b>	Single-family; Multifamily; Manufactured home; At least one full year of account history	N/A
<b>Building Type – New Construction</b>	Single-family; Multifamily; Manufactured home; At least one full year of account history	N/A
<b>Building Size</b>	N/A	N/A
<b>Geography</b>	MidAmerican Iowa electric service area	N/A

Customers selected to participate in the program may receive the following benefits:

- Financial benefits in the form of reduced utility bills due to following the recommendations presented in the Home Energy Report
- Information regarding energy savings tips and other energy efficiency programs of interest
- Access to additional energy savings tips and tools through the web portal
- Heightened awareness of the relationship between energy usage decisions made in the home and the amount of energy used and the cost of this energy on monthly utility bills

#### 4.3.1. Measures and Incentives

The Residential Behavioral program provides incentives for the following measure:

- Personalized Home Energy Reports delivered by direct mail and provided free of charge. Customers have the option to choose email delivery in addition to or instead of direct mail.

#### 4.3.2. Budgets

Anticipated five-year spending for the Residential Behavioral program is provided in Table 19.

*Table 19 Residential Behavioral Budget*

Electric Spending	Administrative Cost	Incentive Cost	Total Cost
2024	\$451,936	\$1,300,000	\$1,751,936
2025	\$565,170	\$1,300,000	\$1,865,170
2026	\$576,782	\$1,300,000	\$1,876,782
2027	\$458,032	\$1,300,000	\$1,758,032
2028	\$446,420	\$1,300,000	\$1,746,420
Total	\$2,498,339	\$6,500,000	\$8,998,339

There are no gas costs associated with this program. Detailed budgets by spending category and staffing assumptions in FTEs for this program are provided in Application Exhibit 4 Budget Accounting for Costs.

#### 4.3.3. Energy Savings

Anticipated energy savings for the Residential Behavioral program are provided in Table 20.

*Table 20 Residential Behavioral Energy Savings*

Electric Savings	Annual kWh	Peak kW
2024	46,501,000	15,315
2025	46,501,000	15,315
2026	46,501,000	15,315
2027	46,501,000	15,315
2028	46,501,000	15,315
Total	232,505,000	N/A

#### 4.3.4. Participation

Participation estimates for each measure offered in this program are provided in Application Exhibit 7 Measure Level Details.

#### 4.3.5. Cost Effectiveness

Anticipated total net economic benefits of the program are provided in Table 21.

*Table 21 Residential Behavioral Cost Effectiveness*

Program	Electric	Total
Program Benefits	\$23,841,966	\$23,841,966
Program Costs	\$8,621,561	\$8,621,561
Net Economic Benefits	\$15,220,405	\$15,220,405
Societal Test Ratio	2.77	2.77

#### 4.3.6. Operations

The Residential Behavioral program delivers targeted messages via the Home Energy Reports to each participating customer. The reports include messaging that compares each household's energy usage to 100 statistically similar homes and includes energy efficiency tips that recommend simple steps each customer can take to reduce their energy usage. Messages are constantly updated and refreshed to motivate customers to act. Key steps in the implementation of the Home Energy Report program are as follows:

- Provide data: MidAmerican supplies the program contractor with weekly data feeds for all Iowa residential customers to ensure energy usage information shown on the Home Energy Report matches energy usage information shown on the customer bill.
- Establish groups: The program contractor utilizes test and control groups to divide the targeted population into two statistically equivalent groups.
- Validate data: The program contractor verifies there is no historical difference in usage between participation and control groups.
- Mail paper reports or email reports: The program contractor mails paper reports and/or email reports to the participation group only. No action is taken with the control group.
- Determine energy savings: The program contractor compares average energy use pre- and post-reports for both groups and reports realized energy savings to MidAmerican.
- Manage operations: MidAmerican's call center answers participant questions by phone and email. The call center is also able to update individual profiles with the participant on the phone by accessing the Customer Service Representative Web Portal. For example, the call center can update the square footage of the participant's

home and view the customer's Home Energy Report so they can answer questions while looking at the same report the participant has at home.

- Customer web portal: Participants also may make updates to their profile online using the Customer Web Portal. The Customer Web Portal is available free of charge to customers who receive the Home Energy Report. It also allows customers to explore additional opportunities to save energy and money.

Customers in the participation groups receive Home Energy Reports via print or email throughout the year. Customers eligible for the program are combination service customers (customers that receive both natural gas and electricity) and customers that are electric only (customers with all electric homes). The program will only report electric savings, although combination service customers will see both electric and gas information on their reports. The program will consist of approximately 285,000 participants in the participation group.

MidAmerican staff provides overall strategic direction for the program, gathering of appropriate customer data, and call center and website support.

MidAmerican uses one program contractor to help deliver the program. The contractor provides the design and content for the Home Energy Report and mails or emails the reports to customers. The contractor also provides estimates of customer savings resulting from the program. MidAmerican currently contracts with Oracle/Opower for program administration. MidAmerican regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process. MidAmerican will issue a request for proposal in 2023 for this program.

#### 4.3.7. Market Barriers

Table 22 presents the key market barriers to an effective Residential Behavioral program and strategies the program uses to address each barrier. These program strategies may only partially offset the identified barriers.



*Table 22 Residential Behavioral Market Barriers and Strategies*

Market Barriers	Program Strategies
Participant lack of confidence in the Home Energy Report and MidAmerican's motives for sending the reports	<p>Participant education and outreach</p> <p>Train call center representatives to answer frequently asked questions and reassure participants</p> <p>Include "Welcome" module in the first Home Energy Report to explain the program and provide instructions to the customer on how to access the Customer Web Portal for more energy saving tips and information</p> <p>Revise language in the Home Energy Reports when appropriate to help minimize complaints and misunderstandings</p>
Concern that homes are not being compared to comparable homes	<p>Encourage participants to update their profiles in the Customer Web Portal to ensure their home is accurately and appropriately compared</p> <p>Train call center representatives to assist customers in updating their profiles on the Customer Web Portal</p>
Concern that reports waste money on postage and natural resources	Educate customers that they may choose email reports and reassure them that the energy saved by the reports makes the expenditures of the program worthwhile

#### 4.3.8. Marketing and Promotion

The Home Energy Report program is an opt-out program and, therefore, not available for customer opt-in. Therefore, MidAmerican will provide information to the public about the program on its website but will not promote it through other means. Customers chosen to participate in the program will receive a "Welcome" module included in the first Home Energy Report. The "Welcome" module explains the program and how to access more information on the Customer Web Portal. The "Welcome" module will encourage customers to visit the online web portal to update their home profile for a more accurate report. MidAmerican has a dedicated call center team that can help customers with questions and profile updates. By providing customers the opportunity to update their home's profile upfront, customer concerns about the Home Energy Reports can be lessened.

#### 4.4. Residential Low Income

The Residential Low Income program provides financial incentives and education to encourage energy efficiency in existing low income housing. The program is delivered through

three separate residential components to serve different customer segments: 1) Statewide Weatherization; 2) Supplemental Weatherization; and 3) and Home Energy Reports. The Statewide Weatherization component only addresses single-family housing, whereas Supplemental Weatherization and Home Energy Reports are available to both single-family homes and apartment dwellers.

The Statewide Weatherization component provides funding to supplement the Iowa Department of Human Rights (IDHR) existing low income weatherization program funded by the Federal Weatherization Assistance Program (WAP). Weatherization services include energy assessments and direct installation of energy efficiency measures delivered by Community Action Partner (CAP) agencies throughout MidAmerican's service area.

The Supplemental Weatherization component will provide funding for measures and services for customers identified as low income. This could include free weatherization kits, food bank/pantry giveaways and partnerships with CAP agencies and community partners, to name a few. Customers will be chosen based on participation in the Low Income Home Energy Assistance Program (LIHEAP) and based on neighborhood income census data.

The Home Energy Reports component includes sending Home Energy Reports to approximately 20,000 customers identified as low income. Customers will be chosen based on participation in LIHEAP and based on neighborhood income census data. The reports will be tailored to include low cost and no cost energy efficiency tips and will be sent either two or four times per year based on longevity in the program.

All three components of the program are available to qualified low income customers in existing single-family housing and some low income multifamily housing (e.g., Supplemental Weatherization for apartment dwellers). Program measures and services are only available to MidAmerican customers. To participate in the program, customers must meet income and other guidelines of the LIHEAP or equivalent assistance programs. MidAmerican estimates the total number of customers eligible to participate in the Residential Low Income program is 200,000.

Table 23 outlines the customer eligibility requirements.

*Table 23 Residential Low Income Customer Eligibility Parameters*

	Electric Equipment	Natural Gas Equipment
<b>Customer Class</b>	Residential electric rate	Residential natural gas rate
<b>Customer Status</b>	Customer homeowners, apartment dwellers and landlords	Customer homeowners, apartment dwellers and landlords
<b>Building Type – Existing</b>	Single-family; Multifamily; Manufactured home	Single-family; Multifamily; Manufactured home
<b>Building Type – New Construction</b>	Single-family; Duplexes; Manufactured home	Single-family; Duplexes; Manufactured home
<b>Building Size</b>	N/A	N/A
<b>Geography</b>	MidAmerican Iowa electric service area	MidAmerican Iowa natural gas service area

Customers participating in the program receive four main benefits:

- Reliable energy savings recommendations from trained auditors
- Immediate savings through the direct installation of free energy saving measures
- Additional savings from behavior changes because of energy efficiency education provided through the Home Energy Reports component
- Significant savings, increased comfort and increased property values through the direct installation of insulation and other efficiency measures

#### 4.4.1. Measures and Incentives

The Residential Low Income program offers participants the following financial incentives:

- Free energy assessments: Customers participating in the Statewide Weatherization component receive free energy assessments.
- Full subsidies: Full subsidies are offered for measures directly installed during Statewide Weatherization assessments. The Supplemental Weatherization component will provide free, easy to install products that will help the customer save energy instantly.
- Home Energy Reports: Home Energy Reports are provided free of charge and can prompt changes in participants' energy use.

Table 24 outlines the current schedule used to reimburse the IDHR and participating CAP agencies for program measures in the Statewide Weatherization program. The reimbursement

limit is intended to cover 100 percent of the costs required to install eligible measures and to cover the administrative costs incurred by the IDHR and the agencies to operate the program. This schedule will be reviewed and updated as required when MidAmerican and IDHR enter into a new weatherization agreement for the years 2024-2028.

*Table 24 Iowa Reimbursement Limits for Low Income Measures*

Measure	Minimum Efficiency Level and Performance Criteria (if Applicable)	Reimbursement Limit
Low-Flow Showerheads	2.0 GPM – max 2 per house	\$10 each
Faucet Aerators	1.5 GPM Brass with Chrome Finish – max 3 per house	\$5 each
Pipe Insulation	Rigid 0.5" foam with 0.75" diameter – max 2 6-foot sections per house	\$10 each
High Efficiency Light Bulbs	5 to 30 Watts ENERGY STAR certified	\$7 each
3-way High Efficiency Light Bulbs	5 to 30 Watts ENERGY STAR certified – max 2 per house	\$15 each
Programmable Thermostat	ENERGY STAR certified	\$100
High-Efficiency Furnace	92+% AFUE or 90%+ for mobile homes – max 1 per house	\$3,500
Venting for Furnaces		\$250 each
Refrigerator	Replacement is indicated based on Baseload Appliance Rating Tool (BART) test – max 1 per house	\$850
Freezer	Replacement is indicated based on (BART) test – max 1 per house	\$650
Clean/Tune Natural Gas Furnace	May be performed on 1 existing natural gas furnace per house, regardless of efficiency level	\$125
Infiltration Measures	Caulking and sealing of whole house as indicated by initial audit including attic bypass sealing	\$500
Duct Sealing	Only applicable to ducts in unconditioned space	\$350
Insulation Measures	Includes wall, attic, floor or foundation, duct, underbelly and bandjoist insulation or a combination thereof	\$4,000
General Repairs	In support of successful application of efficiency measures	\$400

MidAmerican will also work with IDHR to help supplement their contractor training costs to facilitate an increase in qualified contractors to complete projects.

MidAmerican offers incentives for the current program year until approved funds are exhausted or until December 31 of each program year, whichever comes first. MidAmerican performs an annual review of qualifying measures, incentive levels and performance criteria and may adjust measures, eligibility requirements, and incentives as market conditions change and equipment standards change. This may include temporary reduction or suspension of incentives to appropriately manage program costs.

#### 4.4.2. Budgets

Anticipated five-year spending for the Residential Low Income program is provided in Table 25.

*Table 25 Residential Low Income Budget*

Electric Spending	Administrative Cost	Incentive Cost	Total Cost
2024	\$200,334	\$742,900	\$943,234
2025	\$267,520	\$742,900	\$1,010,420
2026	\$350,712	\$1,182,500	\$1,533,212
2027	\$277,562	\$1,182,500	\$1,460,062
2028	\$265,005	\$1,182,500	\$1,447,505
Total	\$1,361,132	\$5,033,300	\$6,394,432
Gas Spending	Administrative Cost	Incentive Cost	Total Cost
2024	\$341,746	\$1,714,500	\$2,056,246
2025	\$357,654	\$1,714,500	\$2,072,154
2026	\$373,387	\$1,714,500	\$2,087,887
2027	\$352,702	\$1,714,500	\$2,067,202
2028	\$337,167	\$1,714,500	\$2,051,667
Total	\$1,762,656	\$8,572,500	\$10,335,156
Total Spending	Administrative Cost	Incentive Cost	Total Cost
2024	\$542,080	\$2,457,400	\$2,999,480
2025	\$625,174	\$2,457,400	\$3,082,574
2026	\$724,099	\$2,897,000	\$3,621,099
2027	\$630,264	\$2,897,000	\$3,527,264
2028	\$602,172	\$2,897,000	\$3,499,172
Total	\$3,123,788	\$13,605,800	\$16,729,588

Detailed budgets by spending category and staffing assumptions in FTEs for this program are provided in Application Exhibit 4 Budget Accounting for Costs.

#### 4.4.3. Energy Savings

Anticipated energy savings for the Residential Low Income program are provided in Table 26.

*Table 26 Residential Low Income Energy Savings*

Electric Savings	Annual kWh	Peak kW
2024	227,370	69
2025	227,370	69
2026	477,000	145
2027	477,000	145
2028	477,000	145
Total	1,885,740	N/A
Gas Savings	Annual Therms	Peak Therms
2024	51,264	554
2025	51,264	554
2026	51,264	554
2027	51,264	554
2028	51,264	554
Total	256,320	N/A

#### 4.4.4. Participation

Participation estimates for each measure offered in this program are provided in Application Exhibit 7 Measure Level Details.

#### 4.4.5. Cost Effectiveness

Anticipated total net economic benefits of the program are provided in Table 27.

*Table 27 Residential Low Income Cost Effectiveness*

Program	Electric	Gas	Total
Program Benefits	\$2,880,071	\$2,513,692	\$5,393,763
Program Costs	\$6,094,437	\$9,899,946	\$15,994,383
Net Economic Benefits	(\$3,214,366)	(\$7,386,254)	(\$10,600,620)
Societal Test Ratio	0.47	0.25	0.34

#### 4.4.6. Operations

The Residential Low Income program provides a comprehensive program designed to reach low income customers in a variety of situations. MidAmerican assists qualified LIHEAP residential customers by providing funds for assessments and weatherization assistance for occupants of single-family dwellings, supplemental weatherization assistance for single-family home occupants and apartment dwellers, and Home Energy Reports, which provide no cost and low-cost energy saving tips and information to a cross section of low income customers. Each component of the program employs a different implementation strategy, as outlined below.

Implementation of Statewide Weatherization is delivered through local CAP agencies responsible for promotion, qualification, assessments and installations, administration, data tracking and support of program-wide evaluation efforts. Key steps in the implementation of the Statewide Weatherization component are as follows:

- Determine eligibility: Identifying customers that qualify for LIHEAP and prioritizing them according to utility bill expense, income level and other criteria.
- Complete on-site assessments: Completing on-site energy assessments, during which auditors directly install simple energy efficiency measures and evaluate eligibility for a predetermined list of more complex measures, such as building insulation and replacement of furnaces and appliances.
- Install measures: Coordinating, where appropriate, with network contractors for measure installation.
- Document results: Documenting program results for IDHR and MidAmerican.

Implementation of the Supplemental Weatherization component will be delivered by various partners as identified at the time of promotion. Delivery partners may include weatherization kit providers, food banks/pantries, CAP agencies, and community partners, to name a few. Key steps in the implementation of the Supplemental Weatherization component are as follows:

- Determine eligibility: Identifying customers that qualify for LIHEAP or are identified based on neighborhood income census data.
- Perform or provide incentive: Work with implementation and/or community partners to deliver energy efficient measures or services.
- Document results: Compile home attributes (if applicable) and measures distributed and report results.



Lastly, the operations of the Home Energy Report component are detailed in section 0 Residential Behavioral Operations with the following exceptions:

- Tailored tips: The tips found in the reports will be tailored for low income participants.
- Provide data: MidAmerican will provide a supplemental data feed to the implementation contractor listing all Iowa customers that qualified for LIHEAP assistance so the implementation contractor can choose participants. In addition to LIHEAP, other census and neighborhood income data will be used to further expand the customer base.

MidAmerican staff provides overall strategic direction for the program, conducts research and development, and provides promotion and other administrative functions.

Local CAP agencies are responsible for qualifying single-family households for the Statewide Weatherization program when they apply for Federal LIHEAP assistance and for delivering services to LIHEAP-eligible customers. The IDHR submits monthly reports to MidAmerican outlining participation levels and installed measures for the Statewide Weatherization component. Each year Dalhoff Associates, a contractor retained by the IDHR and the investor-owned utilities, submits an annual Statewide Low Income Collaborative Evaluation (SLICE) report detailing program expenditures and savings of the Statewide Weatherization component.

MidAmerican currently contracts with Oracle/Opower for the Home Energy Report component program administration and Green Iowa AmeriCorps for the Supplemental Weatherization component. MidAmerican regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process. MidAmerican will issue a request for proposal in 2023 for the Home Energy Report and Supplemental Weatherization component of the program.

#### 4.4.7. Market Barriers

Table 28 presents the key market barriers to an effective Residential Low Income program and strategies the program uses to address each barrier. These program strategies may only partially offset the identified barriers.

*Table 28 Residential Low Income Market Barriers and Strategies*

Market Barriers	Program Strategies
Higher initial cost of energy efficient equipment	Provide no cost measures through direct install or weatherization kits/giveaways Provide free weatherization and equipment measures Educate customers on the long-term energy cost saving benefits of higher efficiency equipment Support leveraging additional funds through state and federal funding
Lack of customer awareness	Provide customer marketing and outreach Provide efficiency and energy usage education Provide free Home Energy Reports Provide free energy assessments
Customers reluctant to ask for help	Work through CAP agencies, which have existing relationships with customers Provide confidential program qualification and implementation process Utilize income and neighborhood census data to identify low income communities and target those areas
Shortage of Statewide Weatherization contractors	Assist the IDHR in funding additional contractor training

#### 4.4.8. Marketing and Promotion

Marketing and outreach for MidAmerican's Statewide Weatherization program is performed by the CAP agencies using their existing network and infrastructure. Marketing and outreach for the Supplemental Weatherization program will be performed primarily by MidAmerican with assistance from program partners. Home Energy Report participants are selected by the implementation contractor based on eligibility and do not require marketing and outreach.

The trade allies that support the Statewide Weatherization component work as subcontractors to the CAP agencies responsible for program administration. Additionally, heating, ventilation and air conditioning (HVAC) contractors and appliance dealers provide replacement equipment for qualifying participants.

MidAmerican will regularly review and update customer-facing program information and marketing materials as part of its internal program evaluation process, and adjust materials as needed based on program adjustments and market characteristics.

#### 4.5. Residential Appliance Recycling

The Residential Appliance Recycling program offers financial incentives to help customers dispose of inefficient refrigerators and freezers in an environmentally responsible manner, removing such units from the market. The program provides incentives to customers participating in the program and free pickup and disposal of appliances. Qualifying equipment includes working, residential-sized refrigerators and freezers and does not require the purchase of new equipment to participate. Program measures must save electricity supplied directly by MidAmerican.

The program objectives are to prevent customers from keeping their existing, residential-sized units when they purchase new ones and to prevent growth in the secondary market for used, inefficient appliances in MidAmerican's service area. MidAmerican estimates the total number of customers eligible to participate in the Residential Appliance Recycling program is 600,000. Table 29 outlines the customer eligibility requirements.

*Table 29 Residential Appliance Recycling Customer Eligibility Parameters*

	Electric Measures	Natural Gas Measures
<b>Customer Class</b>	Residential electric rate	N/A
<b>Customer Status</b>	Customer homeowners; apartment dwellers	N/A
<b>Building Type – Existing</b>	Single-family; Multifamily; Manufactured home	N/A
<b>Building Type – New Construction</b>	Single-family; Multifamily; Manufactured home	N/A
<b>Building Size</b>	N/A	N/A
<b>Geography</b>	MidAmerican Iowa electric service area	N/A

Customers participating in the program receive three main benefits:

- Customers eliminate the difficulty and cost associated with the disposal of large, inefficient, and unwieldy appliances
- Customers save money through incentives and reduced energy bills
- Customers can trust that the materials in their old appliances have been recycled and disposed of properly

#### 4.5.1. Measures and Incentives

Table 30 presents the qualifying efficiency and incentives available for measures included in the program.

*Table 30 Residential Appliance Recycling Incentives by Measure*

Measure	Qualifying Efficiency	Incentive Amount
Refrigerator	Residential-sized; at least 10 cubic feet	\$50/unit and free pick up
Freezer	Residential-sized; at least 10 cubic feet	\$50/unit and free pick up

#### 4.5.2. Budgets

Anticipated five-year spending for the Residential Appliance Recycling program are provided in Table 31.

*Table 31 Residential Appliance Recycling Budget*

Electric Spending	Administrative Cost	Incentive Cost	Total Cost
2024	\$347,273	\$903,960	\$1,251,233
2025	\$473,575	\$903,960	\$1,377,535
2026	\$354,676	\$903,960	\$1,258,636
2027	\$354,676	\$903,960	\$1,258,636
2028	\$340,575	\$903,960	\$1,244,535
Total	\$1,870,775	\$4,519,800	\$6,390,575

There are no gas costs associated with this program. Detailed budgets by spending category and staffing assumptions in FTEs for this program are provided in Application Exhibit 4 Budget Accounting for Costs.

#### 4.5.3. Energy Savings

Anticipated energy savings for the Residential Appliance Recycling program is provided in

Table 32.

*Table 32 Residential Appliance Recycling Savings*

Electric Savings	Annual kWh	Peak kW
2024	3,813,333	569
2025	3,813,333	569
2026	3,813,333	569
2027	3,813,333	569
2028	3,813,333	569
Total	19,066,664	N/A

#### 4.5.4. Participation

Participation estimates for each measure offered in this program are provided in Application Exhibit 7 Measure Level Details.

#### 4.5.5. Cost Effectiveness

Anticipated total net economic benefits of the program are provided in Table 33.

*Table 33 Residential Appliance Recycling Cost Effectiveness*

Program	Electric	Total
Program Benefits	\$9,119,188	\$9,119,188
Program Costs	\$5,046,425	\$5,046,425
Net Economic Benefits	\$4,072,763	\$4,072,763
Societal Test Ratio	1.81	1.81

#### 4.5.6. Operations

MidAmerican's program contractor will determine eligibility of appliances requested for recycling, will pick up eligible appliances at customer premises for no charge and will arrange for environmentally responsible disposal of the appliances. To be eligible for program services and incentives, appliances must be working and must be at least 10 cubic feet in size, no commercial sizes.

Environmentally responsible disposal involves removing chlorinated fluorocarbons (CFCs) from the refrigerant (and possibly from foam insulation), preparing refrigerant for reclamation or recycling and recycling other materials such as metal (and possibly plastic) components.

The program contractor will provide turnkey services to manage and administer the program, including scheduling pickups, tracking program data, answering questions from

customers and providing customer and transaction information to MidAmerican for incentive processing and tracking. Key steps in the implementation of the Residential Appliance Recycling program are as follows:

- Appliance pickup scheduling: An appliance pickup can be scheduled with the program contractor through the online scheduling tool or by calling the program contractor directly. Participants are also transferred to the program contractor by MidAmerican's call center.
- Customer and equipment qualification: The program contractor determines if the customer and the equipment to be recycled is eligible.
- Recycling process: The program contractor picks up the appliance, transports the appliance to a recycling facility, recycles applicable components and appropriately disposes of remaining components.
- Tracking appliances: The program contractor maintains documentation to demonstrate that the materials are recycled appropriately.
- Incentive processing and database maintenance: The program contractor and MidAmerican process incentives and maintain the database for tracking and reporting purposes.

MidAmerican staff provides overall strategic direction for the program, conducts research and development, and provides promotion, evaluation and other administrative functions.

This program is delivered through a program contractor that provides turnkey services to manage and administer the program, including scheduling pickups, tracking program data, answering questions from customers and providing customer and transaction information to MidAmerican for incentive processing and tracking. MidAmerican currently contracts with CLEARResult for program administration. MidAmerican regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process. MidAmerican will issue a request for proposal in 2023 for this program.

#### 4.5.7. Market Barriers



Table 34 presents the key market barriers to an effective Residential Appliance Recycling program and strategies the program uses to address each barrier. These program strategies may only partially offset the identified barriers.

*Table 34 Residential Appliance Recycling Market Barriers and Strategies*

Market Barriers	Program Strategies
Lack of customer awareness	Customer education and outreach Program promotion/advertising Promotion through other residential programs Trade ally outreach sales training
Low dealer awareness	Ongoing dealer communications, outreach, and education
Time required to schedule pickup	Promotion of the online scheduling tool to give customers flexibility to schedule and manage their own appointment
Customers feel they need an extra refrigerator/freezer	Customized educational materials that highlight the cost to operate an old refrigerator or freezer Explanation of environmental benefits of eliminating inefficient appliances

#### 4.5.8. Marketing and Promotion

MidAmerican will target residential sector customers using traditional and nontraditional marketing channels, providing education and outreach to customers and trade allies to encourage customer participation. MidAmerican will reach out to landlord associations to increase the recycling of qualifying units in multifamily buildings. MidAmerican will engage in a multifaceted promotional strategy, including:

- Direct outreach to targeted trade allies
- Ongoing trade ally education about program procedures and benefits, qualifying measures and incentive structures
- Attendance and program promotion at industry, community, and organizational events such as citywide recycling events, recycling conferences, and landlord meetings
- Periodic articles in MidAmerican's monthly electronic newsletter and its quarterly newsletter sent with customer bills
- A dedicated webpage that includes program information, qualification requirements and a direct link to schedule a pickup online.
- Utilization of social media channels

Program referrals are also expected from trade allies. Information will be available on a dedicated portion of MidAmerican's energy efficiency website to assist trade allies in marketing and delivering energy efficient products and services to customers, while encouraging

participation in energy efficiency programs. MidAmerican's Trade Ally Central website offers trade allies the opportunity to download program materials, learn about program changes and provide contact information for future communications. MidAmerican will periodically provide program information and training via a variety of different communication modes to create overarching energy efficiency and program awareness among our customers and trade allies. Further information regarding trade allies is in section 6.1 Education. MidAmerican will regularly review and update customer-facing program information and marketing materials as part of its internal program evaluation process, and adjust materials as needed based on program adjustments and market characteristics.

## 5. Nonresidential Energy Efficiency Programs

### 5.1. Nonresidential Equipment

The Nonresidential Equipment program promotes the purchase of energy efficient equipment by nonresidential customers. The program offers financial incentives to customers installing energy efficient equipment in existing buildings. Program measures must save energy supplied directly by MidAmerican. Cost-effective qualifying nonresidential custom projects for non-standard equipment, new technologies, and alternate strategies may receive incentives through MidAmerican's Nonresidential Energy Solutions program.

The Nonresidential Equipment program is available to all nonresidential customers for existing buildings in MidAmerican's Iowa service area. Nonresidential equipment installed in newly constructed commercial buildings or multifamily housing facilities is not eligible for incentives through the Nonresidential Equipment program. However, MidAmerican's Commercial New Construction program provides services and incentives based on the energy saving strategies chosen for construction of new commercial buildings and multifamily housing facilities containing three or more units, as well as major renovation of existing buildings.

Transportation gas customers with daily metering are ineligible for gas measure incentives; however, customers with monthly metering under the Monthly Metered Transportation service gas tariff are eligible for energy efficiency incentives.

The target market for this program includes commercial and industrial customers of all sizes for existing facilities. MidAmerican estimates the total number of customers eligible to participate in the Nonresidential Equipment program is 102,000. Table 35 outlines the customer eligibility requirements.

*Table 35 Nonresidential Equipment Customer Eligibility Parameters*

	Electric Measures	Natural Gas Measures
<b>Customer Class</b>	Nonresidential electric rate	Nonresidential natural gas rate; Gas transportation customers with daily metering are ineligible
<b>Customer Status</b>	Building or business owners; property managers of customers	Building or business owners; property managers of customers
<b>Building Type – Existing</b>	All	All
<b>Building Type – New Construction</b>	N/A	N/A
<b>Building Size</b>	All	All
<b>Geography</b>	MidAmerican Iowa electric service area	MidAmerican Iowa natural gas service area

Customers participating in the program receive three main benefits:

- Customers save money in the short term through incentives and in the long term through lower utility bills
- Customers receive information about high quality, energy efficient equipment from a professional source
- Equipment incentives are accessible to any eligible customer for qualifying equipment

#### 5.1.1. Measures and Incentives

The Nonresidential Equipment program offers financial incentives to participants in the form of downstream, midstream and upstream incentives. Incentives are offered on a per measure basis to program participants installing qualifying equipment. For some equipment, the incentive will be a fixed amount per measure; for other equipment, the incentive will increase with increasing equipment efficiency.

Table 36 presents the qualifying efficiency and incentives available for measures included in the program.

Table 36 Nonresidential Equipment Incentives by Measure

Measure	Qualification	Estimated Incentive Amount
<b>Heating and Cooling Equipment</b>		
Air source heat pump	ENERGY STAR, AHRI certified	\$450 to \$650 per unit
Ground source heat pump	ENERGY STAR, AHRI certified	\$2,000 per unit
Central air conditioner	ENERGY STAR, AHRI certified	\$100 to \$625 per unit
Boiler	ENERGY STAR, AHRI certified	\$4 to \$6.50 per MBtuh per unit
Natural gas furnace	ENERGY STAR, AHRI certified	\$120 to \$180 per unit
<b>Heating and Cooling Tune-Up</b>		
Boiler	One tune-up per customer, per plan	\$45 per customer
Central air conditioner	One tune-up per customer, per plan	\$45 per customer
Natural gas furnace	One tune-up per customer, per plan	\$40 per customer
<b>Commercial Kitchen</b>		
Steam Cooker	ENERGY STAR certified	\$910 to \$1,360 per unit
Convection Oven	ENERGY STAR certified	\$160 per unit
Standard Fryer	ENERGY STAR certified	\$110 to \$160 per unit
Griddle	ENERGY STAR certified	\$75 to \$740 per unit
Pre-Rinse Spray Valve		\$25 per unit
<b>LED Lighting</b>		
LED linear replacement lamps	DLC certified	\$3.50 per lamp
LED troffers and retrofit kits	DLC certified	\$18 to \$36 per fixture/kit
LED hanging or suspended linear fixtures	DLC certified	\$36 per fixture
LED low and high-bay fixtures	DLC certified	\$48 to \$390 per fixture
LED exterior fixtures	DLC certified	\$60 to \$480 per fixture
Ceiling-mounted LED parking garage fixtures	DLC certified	\$175 per fixture
LED outdoor area lighting	DLC certified	\$100 per fixture

MidAmerican offers incentives for the current program year until approved funds are exhausted or until December 31 of each program year, whichever comes first. MidAmerican

performs an annual review of qualifying measures, incentive levels and performance criteria and may adjust measures, eligibility requirement and incentives as market conditions change and equipment standards change. This may include customer and project incentive caps, temporary reduction or suspension of incentives to appropriately manage program costs and the equitable distribution of incentives.

### 5.1.2. Budgets

Anticipated five-year spending for the Nonresidential Equipment program is provided in Table 37.

*Table 37 Nonresidential Equipment Budget*

<b>Electric Spending</b>	<b>Administrative Cost</b>	<b>Incentive Cost</b>	<b>Total Cost</b>
2024	\$1,349,166	\$3,819,280	\$5,168,446
2025	\$1,410,134	\$3,866,438	\$5,276,573
2026	\$1,489,209	\$3,993,851	\$5,483,060
2027	\$1,486,590	\$4,174,129	\$5,660,718
2028	\$1,513,951	\$4,361,020	\$5,874,971
Total	\$7,249,050	\$20,214,718	\$27,463,768
<b>Gas Spending</b>	<b>Administrative Cost</b>	<b>Incentive Cost</b>	<b>Total Cost</b>
2024	\$56,960	\$167,128	\$224,088
2025	\$69,728	\$177,664	\$247,392
2026	\$73,938	\$188,746	\$262,684
2027	\$69,262	\$199,372	\$268,633
2028	\$72,524	\$210,581	\$283,105
Total	\$342,412	\$943,490	\$1,285,902
<b>Total Spending</b>	<b>Administrative Cost</b>	<b>Incentive Cost</b>	<b>Total Cost</b>
2024	\$1,406,126	\$3,986,408	\$5,392,534
2025	\$1,479,862	\$4,044,102	\$5,523,964
2026	\$1,563,147	\$4,182,597	\$5,745,744
2027	\$1,555,851	\$4,373,500	\$5,929,352
2028	\$1,586,475	\$4,571,601	\$6,158,076
Total	\$7,591,462	\$21,158,208	\$28,749,670

Detailed budgets by spending category and staffing assumptions in FTEs for this program are provided in Application Exhibit 4 Budget Accounting for Costs.

### 5.1.3. Energy Savings

Anticipated energy savings for the Nonresidential Equipment program are provided in Table 38.

*Table 38 Nonresidential Equipment Energy Savings*

Electric Savings	Annual kWh	Peak kW
2024	24,577,391	3,860
2025	24,750,048	3,901
2026	25,425,932	4,020
2027	26,286,624	4,151
2028	27,202,324	4,319
Total	128,242,319	N/A
Gas Savings	Annual Therms	Peak Therms
2024	75,335	1,167
2025	79,345	1,196
2026	75,677	1,123
2027	80,927	1,184
2028	86,128	1,244
Total	397,411	N/A

### 5.1.4. Participation

Participation estimates for each measure offered in this program are provided in Application Exhibit 7 Measure Level Details.

### 5.1.5. Cost Effectiveness

Anticipated total net economic benefits of the program are provided in Table 39.

*Table 39 Nonresidential Equipment Cost Effectiveness*

Program	Electric	Gas	Total
Program Benefits	\$98,799,312	\$5,182,956	\$103,982,269
Program Costs	\$48,850,951	\$3,761,243	\$52,612,194
Net Economic Benefits	\$49,948,362	\$1,421,713	\$51,370,075
Societal Test Ratio	2.02	1.38	1.98

### 5.1.6. Operations

The Nonresidential Equipment program provides prescriptive incentives to customers who purchase qualifying energy efficient equipment. The program is delivered in partnership with heating and cooling distributors, lighting distributors, as well as retail outlets selling qualifying equipment. Equipment incentives are delivered using one or a combination of incentive delivery models which includes:

- Downstream: MidAmerican will offer a limited number of downstream incentives for prescriptive nonresidential measures.
- Midstream: Most incentives will be offered through the midstream delivery model where MidAmerican will work directly with equipment distributors to incentivize the stocking and selling of high-efficiency equipment.
- Upstream: Where appropriate, MidAmerican will work with manufacturer and/or retail partners to offer instant discounts.

MidAmerican staff provides overall strategic direction for the program, as well as conducts research and development, promotion, trade ally support, evaluation, and other administrative functions.

The program is delivered through the assistance of program contractors that handle processing applications, tracking program data, answering questions from dealers and customers, verifying equipment installations, and coordinating incentive distribution to customers. MidAmerican currently contracts with Resource Innovations and DNV Energy Services for management and administrative services of downstream and midstream incentives, respectively. MidAmerican will be actively seeking a program contractor to implement the upstream component of this program. MidAmerican regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process. MidAmerican will issue a request for proposal in 2023 for this program.

### 5.1.7. Market Barriers

Table 40 presents the key market barriers to an effective Nonresidential Equipment program and strategies the program uses to address each barrier. These program strategies may only partially offset the identified barriers.



*Table 40 Nonresidential Equipment Market Barriers and Strategies*

Market Barriers	Program Strategies
Higher first cost of energy efficient equipment	Offer incentives Educate customers on the long-term energy cost-saving benefits of higher efficiency equipment Support leveraging additional funds through state and federal funding
Customers not aware of qualifying products, incentive or providers	Trade ally training to help customers quickly identify appropriate products Provide distributor, contractor and trade ally marketing material Market program and general efficiency awareness to customers
Trade allies not marketing high-efficiency equipment	Provide trade ally training and outreach to explain the benefits of selling high-efficiency equipment Encourage participation in the midstream incentive delivery model Market program and general efficiency awareness to trade allies
Customers don't understand long-term value of high-efficiency equipment	Train trade allies to explain life-cycle costs to customers Market program and general efficiency awareness to customers Provide efficiency education to customers
Equipment distributors are unaware of program	Provide outreach and marketing to equipment distributors

#### 5.1.8. Marketing and Promotion

MidAmerican will target nonresidential customers using traditional and nontraditional marketing channels and provide education and outreach to customers, trade allies, distributors, contractors and industry organizations to encourage customer participation and implementation of energy efficient measures and equipment.

MidAmerican business connections managers will promote the program to mid-size and large commercial and industrial customers during routine contacts. Additionally, business connections managers generally provide energy efficiency program information to their assigned accounts during the first quarter each year, which allows the business connections managers to review the program and answer any questions the customers may have.

MidAmerican will engage in a multifaceted promotional strategy, including:

- Direct outreach through business connections managers and a network of trade allies
- Direct outreach to specific customer types/classes for specific campaigns
- Direct outreach to targeted trade allies
- Ongoing trade ally education about program procedures and benefits, qualifying measures and incentive structures
- Attendance and program promotion at industry, community, and organization/association events
- Periodic articles in MidAmerican's monthly electronic newsletter and its quarterly newsletter sent with customer bills
- A dedicated webpage that includes program information and qualification requirements
- Utilization of social media channels

Trade allies play a key role in implementing the program. To support its trade allies and keep them informed of program opportunities and changes, MidAmerican's energy efficiency website assists trade allies in marketing and delivering energy efficient products and services to customers, while encouraging energy efficiency program participation. MidAmerican's Trade Ally Central website offers trade allies the opportunity to download program materials, learn about program changes and provide contact information for future communications. MidAmerican will periodically provide program information and training via a variety of different communication modes to create overarching energy efficiency and program awareness among our customers and trade allies. Further information regarding trade allies is in section 6.1 Education.

Any business that sells or installs equipment to MidAmerican customers may participate in the program. The following types of trade allies are predominant.

- Heating and cooling distributors and installing contractors
- Plumbing and mechanical distributors and installing contractors
- Lighting distributors and installing contractors
- Electrical contractors
- Engineering firms
- Architects
- Retail outlets

MidAmerican will regularly review and update customer-facing program information and marketing materials as part of its internal program evaluation process, and adjust materials as needed based on program adjustments and market characteristics.

## 5.2. Nonresidential Energy Solutions

The Nonresidential Energy Solutions program promotes comprehensive energy efficiency for existing commercial buildings and industrial facilities through four components: 1) Small Business Express; 2) Direct Project Assistance; 3) Retro-Commissioning and 4) Strategic Energy Management. These components are tailored to the unique needs of nonresidential customers by size and purpose. Business owners can increase their bottom lines and property values by lowering monthly operating costs and investing in advanced efficient technologies while improving building operations and comfort. Qualifying customers receive expert project evaluation advice and financial incentives to help offset the costs of new energy efficiency investments and/or optimizing existing equipment and systems.

The Small Business Express component is a turnkey solution targeted at small commercial buildings and small manufacturers. Third-party qualified service providers will identify energy efficiency opportunities, equipment upgrades customized for their facility, and reduced cost installation services. Eligible participants are encouraged to complete improvements identified by their qualified service provider. Examples of improvements might include lighting, advanced controls, refrigeration, steam trap repair and replacement, failed pipe insulation repair, boiler tune-up and building optimization. Incentives are predominately issued directly to the qualified service provider, which reduces the upfront cost to customers.

The Direct Project Assistance component is targeted at mid-to-large commercial and industrial facilities. Assistance will be provided throughout the project cycle at no cost to customers and may include facility energy assessments, system-specific engineering consultations, project evaluation services and project support to motivate customers to pursue energy-saving opportunities.

The Retro-commissioning (RCx) component is targeted at large commercial and industrial facilities to improve how equipment and systems function together in existing buildings. The RCx process can often resolve problems that occur during building start up or address problems that have evolved throughout the building's life. RCx ultimately enhances control strategies to improve facility or system energy performance. RCx is also a cost-effective way to improve energy efficiency and reduce energy costs. The focus of the offering is to optimize existing systems

through non-capital investments. Customers may find it more cost-effective than installing new equipment. Services within the RCx program may include planning and research to understand owner requirements and identification of potential improvements, investigation and testing to develop cost-to-benefit analysis recommendations which can then be prioritized, and verification of improvements made to facilitate final reports of retro-commissioning activities and measures implemented, estimates of energy cost savings, frequency recommendations for future re-commissioning and operations and maintenance recommendations.

Strategic Energy Management (SEM) is targeted at large commercial and industrial organizations to implement energy management business practices that take a holistic approach to managing energy use to continuously improve energy performance through steady savings over time. It requires and depends on changing operational practices at all levels of the organization to change the culture to value reducing energy waste and the amount of energy required to produce an output or activity. SEM seeks to enable management and staff to reduce energy consumption through behavioral and operational change. SEM is connected closely to other key facets of businesses such as environmental management, production management, logistics and other necessary functions. Through these connections, the SEM process may also identify and support capital project improvements that may fit well into other offerings of the program such as Direct Project Assistance.

These Nonresidential Energy Solutions services are available to all commercial and industrial facilities, multifamily properties, and agriculture customers that receive electricity and/or natural gas directly from MidAmerican. Transportation gas customers with daily metering are ineligible for gas measure incentives; however, customers with monthly metering under the Monthly Metered Transportation service gas tariff are eligible for energy efficiency incentives.

For multifamily properties, the existing structure must have three or more units and be served through nonresidential rates. These participants generally are property management companies or multifamily housing property owners.

The target market for this program includes commercial and industrial customers of all sizes for existing facilities. MidAmerican estimates the total number of customers eligible to participate in the Nonresidential Energy Solutions program is 102,000. Table 41 outlines the customer eligibility requirements.

*Table 41 Nonresidential Energy Solutions Customer Eligibility Parameters*

	Electric Measures	Natural Gas Measures
<b>Customer Class</b>	Nonresidential electric rate	Nonresidential natural gas rate; Gas transportation customers with daily metering are ineligible
<b>Customer Status</b>	Building or business owners; property managers of customers	Building or business owners; property managers of customers
<b>Building Type – Existing</b>	Commercial buildings and industrial facilities	Commercial buildings and industrial facilities
<b>Building Type – New Construction</b>	New commercial and industrial facilities that do not satisfy the Commercial New Construction program's eligibility criteria	New commercial and industrial facilities that do not satisfy the Commercial New Construction program's eligibility criteria
<b>Building Size</b>	All	All
<b>Geography</b>	MidAmerican Iowa electric service area	MidAmerican Iowa natural gas service area

Customers participating in the program receive these main benefits:

- Financial assistance
  - Incentives that reduce the payback of implemented energy efficiency measures
  - Energy savings for the lifetime of the installed measures
  - Increased property values due to lower monthly operation costs, investment in advanced efficient technologies and improved building operation and comfort
- Project assistance
  - Access to a team of independent, unbiased engineers to help evaluate energy-saving opportunities
  - Comprehensive information regarding the costs and benefits of project-specific energy efficiency strategies
  - Assistance with obtaining qualified trade allies to ensure successful project implementation
  - Professional, independent estimation and verification of measure savings

#### 5.2.1. Measures and Incentives

The Nonresidential Energy Solutions program offers financial incentives to participants through the following components:

- Small Business Express
  - Prescriptive incentives, as outlined in the Nonresidential Equipment program, will apply to projects in the Small Business Express offering; additional incentives may be developed for other common measures encountered in small commercial buildings or industrial facilities.
  - Incentives are offered either on a per-measure basis or a fixed rate per kilowatt-hour/therm of annual energy savings to program participants installing qualifying equipment.
- Direct Project Assistance
  - Project Assistance is provided throughout the project cycle at no cost to customers. Assistance includes system-specific engineering consultations, facility energy assessments, project evaluation services, project management support to help customers develop, manage, and implement energy efficiency action plans, and verification of installed projects.
  - Customers have the option of receiving additional assistance with project implementation, which may include:
    - Obtaining and reviewing vendor bids
    - Performing and/or refining energy analysis as project scope matures
    - Acquiring and reviewing trend data as required by the program or to help inform an investment decision
  - Prescriptive incentives, as outlined in the Nonresidential Equipment program, will apply to projects in the Direct Project Assistance component. Incentives are offered on a per-measure basis to program participants' installing qualifying equipment. For some equipment, the incentive will be a fixed amount per measure; for other equipment, the incentive will increase with increasing equipment efficiency.
  - Custom incentives are offered at a fixed rate per kilowatt-hour/therm of annual energy savings to program participants installing qualifying equipment. Incentives will be adjusted based on budget, market condition and equipment standards. Incentive may be similar to:
    - Heating and cooling: \$0.12 per kilowatt-hour saved or \$1.00 per therm saved
    - Lighting: \$0.10 per kilowatt-hour saved
    - Process/other: \$0.08 per kilowatt-hour saved or \$1.00 per therm saved

- Retro-Commissioning
  - The building system documentation and investigation services are delivered at no cost to qualifying customers. Training is provided to the customer's building facility staff to ensure they continue to monitor and maintain the building to maintain energy savings over time.
  - Measure incentives may be calculated at \$0.05 per kilowatt-hour for the first year of electricity savings plus \$100 per average peak kW saved and \$0.35 per therm for the first year of natural gas savings. Customer incentives cannot exceed 100 percent of project implementation costs.
- Strategic Energy Management
  - Coaching and engineering services are delivered at no cost to qualifying customers.
  - Measure incentives may be calculated at \$0.02 per verified kWh savings for the first year of electricity savings and \$0.35 per therm for the first year of natural gas savings to offset some of the customer's costs. Customer incentives cannot exceed 100 percent of project implementation costs.

If a measure is identified but not a fit for the SEM process, that measure may be eligible for rebates through the equipment or custom offerings in the Nonresidential Energy Solutions program.

MidAmerican offers incentives for the current program year until approved funds are exhausted or until December 31 of each program year, whichever comes first. MidAmerican performs an annual review of qualifying measures, incentive levels and performance criteria and may adjust measures, eligibility requirements and incentives as market conditions change and equipment standards change. This may include customer and project incentive caps, temporary reduction, or suspension of incentives to appropriately manage program costs and the equitable distribution of incentives.

### 5.2.2. Budgets

Anticipated five-year spending for the Nonresidential Energy Solutions program is provided in

Table 42.



*Table 42 Nonresidential Energy Solutions Budget*

<b>Electric Spending</b>	<b>Administrative Cost</b>	<b>Incentive Cost</b>	<b>Total Cost</b>
2024	\$2,329,123	\$6,574,440	\$8,903,563
2025	\$2,305,531	\$6,592,825	\$8,898,356
2026	\$2,645,429	\$6,597,739	\$9,243,168
2027	\$2,472,957	\$6,908,074	\$9,381,032
2028	\$2,612,455	\$7,128,273	\$9,740,728
Total	\$12,365,495	\$33,801,351	\$46,166,846
<b>Gas Spending</b>	<b>Administrative Cost</b>	<b>Incentive Cost</b>	<b>Total Cost</b>
2024	\$93,016	\$249,417	\$342,434
2025	\$97,844	\$259,846	\$357,690
2026	\$143,937	\$266,457	\$410,394
2027	\$112,454	\$284,446	\$396,900
2028	\$109,698	\$295,420	\$405,118
Total	\$556,950	\$1,355,586	\$1,912,536
<b>Total Spending</b>	<b>Administrative Cost</b>	<b>Incentive Cost</b>	<b>Total Cost</b>
2024	\$2,422,139	\$6,823,857	\$9,245,996
2025	\$2,403,375	\$6,852,671	\$9,256,046
2026	\$2,789,366	\$6,864,196	\$9,653,562
2027	\$2,585,411	\$7,192,521	\$9,777,932
2028	\$2,722,153	\$7,423,693	\$10,145,846
Total	\$12,922,445	\$35,156,938	\$48,079,382

Detailed budgets by spending category and staffing assumptions in FTEs for this program are provided in Application Exhibit 4 Budget Accounting for Costs.

### 5.2.3. Energy Savings

Anticipated energy savings for the Nonresidential Energy Solutions program are provided in

Table 43.

*Table 43 Nonresidential Energy Solutions Savings*

Electric Savings	Annual kWh	Peak kW
2024	44,794,897	6,963
2025	44,794,897	6,963
2026	44,435,558	6,963
2027	46,671,319	7,226
2028	47,264,810	7,402
Total	227,961,481	N/A
Gas Savings	Annual Therms	Peak Therms
2024	279,382	1,124
2025	279,382	1,124
2026	257,689	1,124
2027	302,874	1,138
2028	280,920	1,137
Total	1,400,246	N/A

#### 5.2.4. Participation

Participation estimates for each measure offered in this program are provided in Application Exhibit 7 Measure Level Details.

#### 5.2.5. Cost Effectiveness

Anticipated total net economic benefits of the program are provided in Table 44.

*Table 44 Nonresidential Energy Solutions Cost Effectiveness*

Program	Electric	Gas	Total
Program Benefits	\$233,963,800	\$8,008,011	\$241,971,812
Program Costs	\$73,792,749	\$2,895,401	\$76,688,150
Net Economic Benefits	\$160,171,051	\$5,112,610	\$165,283,661
Societal Test Ratio	3.17	2.77	3.16

#### 5.2.6. Operations

The Nonresidential Energy Solutions program uses distinct processes for each of the components.

The Small Business Express component is designed to provide small commercial buildings and industrial facilities with a streamlined approach to achieve energy savings. Participants are encouraged to pursue comprehensive energy saving opportunities and will work in conjunction with a network of trade allies. Key steps in the implementation of the Small Business Express component are as follows:

- Screening: MidAmerican will confirm the eligibility of customers interested in participating in Small Business Express.
- Energy efficiency opportunities identified: A qualified service provider will review the commercial building and operating equipment, systems and processes. Energy-saving opportunities will be recorded using a program-provided tool.
- Energy savings opportunity report: A report will be generated by the tool and provided to the customer. The report will summarize the recommended energy-saving opportunities, incentives, and next steps. The results will provide the details necessary to allow the customer to make an informed decision about which energy-saving opportunities to pursue.
- Implementation support: The customer selects a qualified service provider to implement the upgrades. The program contractor may provide varying levels of implementation support depending on the customer's needs.
- Installation: The qualified service provider will coordinate installation of the selected energy-saving opportunities and communicate project completion.
- Verification: The program contractor may conduct verification activities on existing equipment prior to installation or post-installation prior to payment.
- Incentive processing and database maintenance: The program contractor and MidAmerican staff process incentives and maintain the database for tracking and reporting purposes; incentives can be paid directly to the qualified service provider.

Direct Project Assistance is targeted to mid-to-large commercial and industrial facilities with customer-identified projects. Key steps in the implementation of the Direct Project Assistance component are as follows:

- Project evaluation: Projects can be further evaluated to refine savings estimates and/or compare the advantages of various implementation approaches to help customers make an informed business decision. Custom projects require preapproval prior to project implementation.

- Incentive application: When a customer completes a prescriptive or custom project, they submit an application for review and processing.
- Verification: The program contractor may conduct verification activities on existing equipment prior to installation or post installation prior to payment.
- Incentive processing and database maintenance: The program contractor and MidAmerican process incentives and maintain the database for tracking and reporting purposes.

The RCx component is designed to provide larger commercial buildings and industrial facilities with a low-cost and holistic approach to achieve energy savings. Participants will work with a program contractor's engineering staff and trade allies to identify and implement RCx opportunities and create continued plans to maintain future energy savings. Key steps in the implementation of the RCx component are as follows:

- Screening: MidAmerican and program contractor will confirm the eligibility of customers interested in participating in RCx.
- Building system documentation: Program contractor's engineering staff will work with the customer or customer representative to document existing facility systems, equipment and operation.
- Investigation: A report will be generated by program contractor's engineering staff and provided to the customer. The report will summarize the recommended low-cost/non-capital investment energy-saving opportunities and next steps. The report will include a priority list of measures to be implemented with benefit-to-cost information provided to aid in decision making.
- Implementation: The customer and/or their preferred trade ally will implement the RCx opportunities the customer has selected to pursue.
- Verification: The program contractor will conduct verification activities on implemented RCx opportunities. Diagnostic equipment from the previous phase or new monitoring equipment may be installed to verify energy savings. This step will include updating or creating equipment and operations documentation as required.
- Rebate processing and database maintenance: The program contractor and MidAmerican staff process any incentives and maintain the database for tracking and reporting purposes.

The SEM component is designed for participants who are interested in developing and integrating energy management practices at their sites. The program helps participants establish

organization-wide energy management commitments that will help them meet their energy, environmental, resilience and/or other company goals or local mandates. Key steps in the SEM operation include

- Screening: MidAmerican and program contractor will confirm the eligibility of customers interested in participating in SEM.
- Kick-off: Customer representatives will attend a kick-off meeting and complete prerequisite tasks to start the SEM process.
- Workshops: Customer representatives will attend SEM workshops delivered by a SEM Coach over a one-year cycle.
- Energy treasure hunt: Customers will participate in a treasure hunt to identify low-/no-cost projects and capital projects that will reduce site energy use.
- Access to additional resources: The customer gains access to a library of energy management resources, tools, and webinars.
- Creation of a business energy policy: The customer receives guidance to help create an energy policy and energy goals and must put a plan in place to achieve them.
- Continuous commitment: Customers may be considered for a second year of engagement and receive support of SEM Coaches.

MidAmerican staff provides overall strategic direction for the program, as well as conducts research and development, promotion, trade ally support, evaluation, and other administrative functions.

The program is delivered through the assistance of a program contractor that provides energy analysis, energy management coaching and education, project management, verification, and information technology services. The contractor also helps MidAmerican strengthen relations with key trade allies and assists with data tracking and incentive processing. MidAmerican currently contracts with Resource Innovations for management and administrative services of the Nonresidential Energy Solutions program. MidAmerican regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process. MidAmerican will issue a request for proposal in 2023 for this program.

#### 5.2.7. Market Barriers

Table 45 presents the key market barriers to an effective Nonresidential Energy Solutions program and strategies the program uses to address each barrier. These program strategies may only partially offset the identified barriers.

*Table 45 Nonresidential Energy Solutions Market Barriers and Strategies*

Market Barriers	Program Strategies
High cost of efficient equipment and competition for capital expenses	<p>Provide incentives set at levels to help offset incremental costs and compete favorably with other investments</p> <p>Empower facility staff to identify and implement low-cost/no-cost operational improvements within their facilities</p> <p>Support leveraging additional funds through state and federal funding</p>
Time and resource constraints	<p>Provide free project assistance to help identify and evaluate cost-effective options</p> <p>Provide a flexible and streamlined participation process</p> <p>Provide customers with the tools and program resources needed to help organize and strategically implement identified efficiency opportunities</p> <p>Maintain a network of qualified trade allies to assist with obtaining a qualified contractor</p> <p>Deliver a program that offers participants flexibility, high-level customer support and follow-through</p> <p>Provide simple maintenance tips for ongoing savings</p>
Lack of confidence in savings estimates from vendors	<p>Offer independent third-party estimation and verification of energy savings</p> <p>Develop and share case studies of actual projects with energy savings where appropriate</p>
Low customer awareness of program	<p>Marketing and direct outreach to targeted customers</p> <p>Develop a network of qualified trade allies who are capable of effectively promoting the program to potential participants</p>
Low trade ally awareness	Ongoing trade ally communications and outreach
Split incentive (i.e., rental property owners own the building, but the tenants pay the utility bills)	<p>Provide financial incentives for energy efficiency upgrades</p> <p>Educate landlords about increasing property values and greater demand for units resulting from energy upgrades</p>
Building owners often choose to use their limited resources to make capital improvements to items seen by their tenants (e.g., paint, floor coverings, decorations)	Educate the building owner on the importance of energy-related capital improvements such as ENERGY STAR certified appliances, heating and cooling improvements, and efficient lighting products

### 5.2.8. Marketing and Promotion

MidAmerican will target nonresidential customers using traditional and nontraditional marketing channels and provide education and outreach to customers, trade allies, distributors, contractors and industry organizations to encourage customer participation and implementation of energy efficient measures and equipment.

MidAmerican business connections managers will promote the program to mid-size and large commercial and industrial customers during routine contacts. Additionally, business connections managers generally provide energy efficiency program information to their assigned accounts during the first quarter each year, which allows the business connections managers to review the program and answer any questions the customers may have.

MidAmerican will engage in a multifaceted promotional strategy, including:

- Direct outreach through business connections managers and a network of trade allies
- Direct outreach to specific customer types/classes for specific campaigns
- Direct outreach to targeted trade allies
- Ongoing trade ally education about program procedures and benefits, qualifying measures and incentive structures
- Attendance and program promotion at industry, community, and organization/association events
- Periodic articles in MidAmerican's monthly electronic newsletter and its quarterly newsletter sent with customer bills
- Advertisements and case studies in appropriate professional and trade journals and publications
- A dedicated webpage that includes program information, qualification requirements and a program brochure
- Utilization of social media channels

Trade allies play a key role in implementing the program. To support its trade allies and keep them informed of program opportunities and changes, MidAmerican's energy efficiency website assists trade allies in marketing and delivering energy efficient products and services to customers, while encouraging energy efficiency program participation. MidAmerican's Trade Ally Central website offers trade allies the opportunity to download program materials, learn about program changes and provide contact information for future communications. MidAmerican will periodically provide program information and training via a variety of different communication



modes to create overarching energy efficiency and program awareness among our customers and trade allies. Further information regarding trade allies is in section 6.1 Education.

Any business that sells or installs equipment to MidAmerican customers may participate in the program. The following types of trade allies are predominant.

- Heating and cooling distributors and installing contractors
- Plumbing and mechanical distributors and installing contractors
- Lighting distributors and installing contractors
- Mechanical, electrical and equipment contractors
- Specialized farm equipment dealers, developer/contractors
- Engineering firms
- Architects

MidAmerican will regularly review and update customer-facing program information and marketing materials as part of its internal program evaluation process, and adjust materials as needed based on program adjustments and market characteristics.

### 5.3. Commercial New Construction

The Commercial New Construction program promotes the design and construction of high-efficiency commercial buildings, including new building construction and major renovations of existing buildings. The program is delivered in partnership with developers, architects, engineering firms, and equipment contractors, and provides a mix of technical and financial assistance to help influence projects during the planning stage. Energy design assistance and construction incentives are offered to reduce market barriers to incorporating electric energy efficiency in construction projects.

Transportation gas customers with daily metering are ineligible for gas incentives. However, customers with monthly metering under the Monthly Metered Transportation Service gas tariff are eligible for energy efficiency incentives.

The program will offer a variety of services, tailored to the varying needs of different market segments. Based on project type, size, etc., the program will assign the new construction project to the appropriate service that best fits the customer's needs. The services include:

- Streamlined Service: Targets small buildings between 5,000 and 15,000 square feet and select building types with simple system types, such as warehouses, that want a streamlined process. Utilizes an online tool to evaluate and select energy efficiency

strategies. Customers use the tool in a self-service way but may request design assistance at any point.

- **Standard Service:** Serves most projects with design assistance through collaborative design meetings using interactive energy modeling. Buildings 5,000 square feet or larger qualify. Provides analysis of up to three mechanical systems and dozens of energy efficiency strategies.
- **Enhanced Service:** Targets projects with aggressive energy efficiency goals – typically energy savings of 40 percent or greater. Provides design assistance consulting through collaborative design meetings using interactive energy modeling with analysis of advanced energy efficiency strategies. Projects may be seeking to be net zero energy, net zero carbon or may be seeking certification through a rating system such as Leadership in Energy and Environmental Design (LEED) or the Living Building Challenge.
- **Data Center Advantage Service:** Recognizes the unique energy demands and reliability requirements posed by data centers. Serves new stand-alone data centers and existing data centers implementing energy saving retrofits. Existing data centers may range in size from server rooms to hyperscale stand-alone facilities.
- **Multifamily Service:** Targets the needs of high-rise and low-rise multifamily housing projects. Whole-building energy analysis will be provided to guide the selection of efficiency strategies. Evaluates energy efficiency opportunities of the building, both as a whole and as individual housing units, to increase energy savings and drive energy efficiency.
- **Volume Build Service:** Targets building owners that build multiple identical buildings based on a prototype design. Convenience stores are likely participants. Design assistance is provided one time, during prototype development, but energy savings verification is completed for each individual building.

The program targets building owners, builders and developers engaged in new construction or major renovations of buildings in the commercial sector, including qualifying low-rise and high-rise multifamily housing facilities.

This program is not designed to assist industrial customers constructing new manufacturing facilities and processes. These customers may be eligible for services under the Nonresidential Energy Solutions program. However, industrial customers building new non-process buildings (e.g., office space, non-process warehouses) are eligible for this program. MidAmerican estimates

the total number of customers eligible to participate in the Commercial New Construction program is 25,000. Table 46 outlines the customer eligibility requirements.

*Table 46 Commercial New Construction Customer Eligibility Parameters*

	Electric Measures	Natural Gas Measures
<b>Customer Class</b>	Nonresidential electric rate; Residential electric rates for multifamily	Nonresidential natural gas rate; Residential natural gas rates for multifamily; Gas transportation customers with daily metering are ineligible
<b>Customer Status</b>	Building owners and developers	Building owners and developers
<b>Building Type – Existing</b>	Commercial buildings and multifamily projects three units and greater undergoing major renovation; Data centers	Commercial buildings and multifamily projects three units and greater undergoing major renovation; Data centers
<b>Building Type – New Construction</b>	Commercial buildings and multifamily projects three units and greater	Commercial buildings and multifamily projects three units and greater
<b>Building Size</b>	Minimum of 5,000 square feet	Minimum of 5,000 square feet
<b>Geography</b>	MidAmerican Iowa electric service area	MidAmerican Iowa natural gas service area

Customers participating in the program receive three main benefits:

- Financial
  - Free energy design assistance and modeling
  - Comprehensive construction incentives that reduce the payback period of selected energy efficiency measures
  - Increased property values and occupancy rates due to lower monthly operating costs, investment in advanced efficiency technologies and improved building operation and comfort
- Decision support
  - Valuable information on the costs and benefits of energy efficiency strategies customized to the building
  - Detailed design specifications for selected measures
  - Interactive online energy modeling and evaluation of energy savings strategies

- Multifamily projects will have energy cost savings and incentive information reported on a per housing unit basis
- Confidence in final design decisions
  - Owner/developer involvement in the measure selection and review process
  - Independent verification that selected measures are included in design specifications construction documents and final installation

### 5.3.1. Measures and Incentives

All measures or strategies that improve energy efficiency relative to the State of Iowa Energy Code are potentially eligible for the Commercial New Construction program. Typical measures include:

- Glazing systems and window layouts
- Daylighting controls
- Envelope systems
- Lighting controls and lighting designs
- Heating and cooling systems
- Load-responsive fan and pump motor controls
- Outside air control systems
- Plug Loads
- Kitchen equipment
- Other strategies unique to the project, such as data centers

The Commercial New Construction program offers the following financial incentives to participants:

- No-cost energy design assistance: MidAmerican's program contractor works with customers, architects and developers during the planning and design stage and studies and tests energy efficiency strategies to be incorporated into construction plans.
- Design team incentives: Architects and engineers must dedicate considerable resources to the energy design process. To prevent the extra cost from being allocated to the customer, design team participants receive electric and/or natural gas incentive payments to help offset expenses associated with program participation. The program offers varied amounts of design team incentives ranging from \$1,000 to \$10,000 depending on the service provided and complexity of the project.

- **Construction incentives:** Construction incentives are paid to the building owner when a target level of energy savings above the Iowa Energy Code is achieved. Construction incentives are designed to help offset the additional cost of optimizing energy efficiency strategies in the construction of commercial buildings. The program offers incentives for projects resulting in at least five percent energy savings above Code, based on ASHRAE-90.1-2010 Appendix G. The program will update the Code baseline for new project starts when/if Iowa adopts a new Code.
- **Streamlined, Standard, Enhanced and Volume Build incentive structure** – Incentives increase with savings. Electric incentives range from \$0.06/kWh to \$0.17/kWh for savings ranging from 5 percent to 40 percent or higher above baseline. Natural gas incentives range from \$0.60/therm to \$1.70/therm for savings ranging from 5 percent to 40 percent or higher above baseline. Incentives may be revised during the plan, particularly for compatibility with Iowa's expected energy code changes. Project incentives will be capped at a one-year simple payback, may not exceed 50 percent of the total bundled incremental project cost beyond energy code requirements, and may not exceed \$500,000 per building.
- **Data Center Advantage incentive structure:** Data centers will be eligible for a flat rate incentive of \$0.10/kWh and \$1.50/therm of annual savings beyond the program baseline. Incentives may be revised during the plan. Project incentives will be capped at a one-year simple payback, may not exceed 50 percent of the total bundled incremental project cost, and may not exceed \$500,000 per building.
- **Multifamily Service incentive structure:** Incentives will be provided on a sliding scale for residential incentives as shown in Table 47. Incentives may be revised during the plan, particularly for compatibility with Iowa's expected energy code changes. Project incentives will be capped at a one-year simple payback, may not exceed 50 percent of the total bundled incremental project cost beyond energy code requirements, and may not exceed \$500,000 per building.

*Table 47 Commercial New Construction Multifamily Service Incentive Structure*

Percent Whole Building Energy Savings Compared to Energy Code	Incentive/Unit
5% - 10% above energy code	\$100
11% - 15% above energy code	\$300
16% - 20% above energy code	\$500
21% - 25% above energy code	\$700

Percent Whole Building Energy Savings Compared to Energy Code	Incentive/Unit
26% - 30% above energy code	\$900
31% and greater above energy code	\$1,100

All Commercial New Construction projects are ineligible for Residential or Nonresidential Equipment incentives. MidAmerican performs an annual review of qualifying measures, incentive levels and performance criteria and may adjust measures, eligibility requirements and incentives as market conditions change and equipment standards change. This may include customer and project incentive caps, temporary reduction or suspension of incentives to appropriately manage program costs, and the equitable distribution of incentives.

### 5.3.2. Budgets

Anticipated five-year spending for the Commercial New Construction program is provided in Table 48.

*Table 48 Commercial New Construction Budget*

Electric Spending	Administrative Cost	Incentive Cost	Total Cost
2024	\$2,976,813	\$8,415,000	\$11,391,813
2025	\$2,934,457	\$8,415,000	\$11,349,457
2026	\$3,168,306	\$8,415,000	\$11,583,306
2027	\$3,241,919	\$9,075,000	\$12,316,919
2028	\$3,245,904	\$9,350,000	\$12,595,904
Total	\$15,567,399	\$43,670,000	\$59,237,399
Gas Spending	Administrative Cost	Incentive Cost	Total Cost
2024	\$95,307	\$244,286	\$339,592
2025	\$136,283	\$366,429	\$502,711
2026	\$176,633	\$403,071	\$579,705
2027	\$173,346	\$451,929	\$625,274
2028	\$165,002	\$451,929	\$616,930
Total	\$746,570	\$1,917,643	\$2,664,213

Total Spending	Administrative Cost	Incentive Cost	Total Cost
2024	\$3,072,119	\$8,659,286	\$11,731,405
2025	\$3,070,739	\$8,781,429	\$11,852,168
2026	\$3,344,939	\$8,818,071	\$12,163,011
2027	\$3,415,265	\$9,526,929	\$12,942,194
2028	\$3,410,906	\$9,801,929	\$13,212,835
Total	\$16,313,969	\$45,587,643	\$61,901,612

Detailed budgets by spending category and staffing assumptions in FTEs for this program are provided in Application Exhibit 4 Budget Accounting for Costs.

### 5.3.3. Energy Savings

Anticipated energy savings for the Commercial New Construction program are provided in Table 49.

*Table 49 Commercial New Construction Savings*

Electric Savings	Annual kWh	Peak kW
2024	70,365,593	21,360
2025	70,365,593	21,360
2026	70,365,593	21,360
2027	75,884,463	23,036
2028	78,183,992	23,734
Total	365,165,232	N/A
Gas Savings	Annual Therms	Peak Therms
2024	135,714	1,764
2025	203,571	2,646
2026	223,929	2,911
2027	251,071	3,264
2028	251,071	3,264
Total	1,065,357	N/A

### 5.3.4. Participation

Participation estimates for each measure offered in this program are provided in Application Exhibit 7 Measure Level Details.

### 5.3.5. Cost Effectiveness

Anticipated total net economic benefits of the program are provided in Table 50.

*Table 50 Commercial New Construction Cost Effectiveness*

Program	Electric	Gas	Total
Program Benefits	\$951,659,262	\$18,124,331	\$969,783,593
Program Costs	\$88,187,621	\$3,915,529	\$92,103,150
Net Economic Benefits	\$863,471,642	\$14,208,802	\$877,680,443
Societal Test Ratio	10.79	4.63	10.53

### 5.3.6. Operations

The Commercial New Construction program uses a similar process for each of the energy design assistance services, although services are tailored to project timing, technical expertise, and other needs of each market segment. Key steps in the implementation of the Commercial New Construction program are as follows:

- Application: The design team or owner submits an application to prequalify the project.
- Screening: MidAmerican and program contractor screen the project to verify that it meets program guidelines.
- Strategy discussion: Upon acceptance, the program contractor facilitates energy design assistance meetings with the design team to develop optional energy conservation strategies for analysis.
- Consultation: The program contractor facilitates discussions and energy modeling of various energy-saving strategies. A final energy design report is provided to the owner and design team describing implementation, energy savings and simple paybacks for the strategies. MidAmerican pays a design team participation incentive to help offset the design team members' expenses associated with program participation.
- Selection: The building owner and design team choose strategies that will be incorporated into construction. After energy-saving strategies are chosen, the construction phase begins.



- Design requirements provided: MidAmerican provides a list of design requirements necessary to achieve the energy efficiency goal and receive the full incentive.
- Final verification: After construction is completed and the building is occupied, MidAmerican's consultant will review final documents to create a final verification report and may conduct a site visit.
- Incentive processing and database maintenance: The program contractor and MidAmerican staff process incentives and maintain the database for tracking and reporting purposes.

MidAmerican staff provides overall strategic direction for the program, as well as conducts research and development, promotion, trade ally support, evaluation, and other administrative functions.

The program is delivered through the assistance of a program contractor that provides energy design assistance, project management and verification services. The contractor also helps MidAmerican strengthen relations with key trade allies and assists with data tracking and incentive processing. MidAmerican currently contracts with Willdan Group, Inc. for management and administrative services of this program. MidAmerican regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process. MidAmerican will issue a request for proposal in 2023 for this program.

### 5.3.7. Market Barriers

Table 51 presents the key market barriers to an effective Commercial New Construction program and strategies the program uses to address each barrier. These program strategies may only partially offset the identified barriers.

*Table 51 Commercial New Construction Market Barriers and Strategies*

Market Barriers	Program Strategies
Higher cost of building due to energy efficient strategies	Offer incentives to help offset costs at the design phase Offer incentives on a per-unit basis for multifamily Provide education during the process to help customers understand the benefits of these strategies
Limited time to engage in long design process	Offer incentives to design team as compensation for time Use a streamlined, efficient and responsive process Help design team bring added value to customers

Market Barriers	Program Strategies
Lack of customer awareness of alternative design strategies	Provide free design assistance Encourage high-level decision maker involvement throughout the design process Support program with education appropriate to different types of program participants (e.g., designers, owners)
Customers value design features over efficiency; reluctant to spend resources on energy features	Raise customer awareness through energy design assistance process Focus on long-term benefits of energy efficiency features Provide incentives to lower incremental cost of efficiency features Provide energy model results for new technology to encourage implementation in this project or their next
Low customer awareness of program	Ongoing trade ally communications and outreach Marketing and outreach to targeted customers Social media, case studies and video to reach new customers
Low trade ally awareness	Ongoing trade ally support and education Ensure trade allies are aware that training sessions for this program are eligible for LEED Continuing Education Credit
Late project involvement in program	Develop relationships with architects to ensure contact as early as possible in the design stage Educate designers and developers about program requirements and commitments Provide information regarding prescriptive and custom incentives offered through the Nonresidential Equipment and/or Nonresidential Energy Solutions programs that would be available if the project does not qualify the Commercial New Construction program

### 5.3.8. Marketing and Promotion

MidAmerican will target new construction projects using traditional and nontraditional marketing channels and provides education and outreach to customers, trade allies and building community organizations to encourage customer participation. Additionally, MidAmerican business and community development, and business connections managers will promote the program in their customer interactions.

MidAmerican will engage in a multifaceted promotional strategy, including:

- Direct outreach to commercial building owners, architectural and engineering firms, builders, developers and trade allies
- Promotional and educational activities, such as workshops and presentations for customers, as well as other stakeholders in the nonresidential building community
- Attendance and program promotion at architectural and building conferences and trade shows
- Recognition and awards to trade allies and customers for successful projects
- Advertisements, customer success stories and case studies in appropriate professional and trade journals and publications
- Periodic articles in MidAmerican's electronic newsletter and its quarterly newsletter provided with customer bills
- A dedicated webpage that includes program information, qualification requirements and a program fact sheet
- A reference to MidAmerican's energy efficiency website that will appear periodically on customer bills and in the electronic newsletter
- Earned media from press releases regarding successful, high-profile projects
- Social media and program video

Trade allies play a key role in implementing the program. To support its trade allies and keep them informed of program opportunities and changes, MidAmerican's energy efficiency website assists trade allies in marketing and delivering energy efficient products and services to customers, while encouraging energy efficiency program participation. MidAmerican's Trade Ally Central website offers trade allies the opportunity to download program materials, learn about program changes and provide contact information for future communications. MidAmerican will periodically provide program information and training via a variety of different communication modes to create overarching energy efficiency and program awareness among our customers and trade allies. Further information regarding trade allies is in section 6.1 Education.

The program relies primarily on the following types of trade allies for program delivery:

- Architect and engineering firms
- Developers
- Construction firms/building contractors
- Design-build contractors

- Mechanical, electrical and equipment contractors

MidAmerican will regularly review and update customer-facing program information and marketing materials as part of its internal program evaluation process, and adjust materials as needed based on program adjustments and market characteristics.

#### 5.4. Nonresidential Low Income

The Nonresidential Low Income program provides financial incentives and education to encourage energy efficiency in new and existing multifamily properties and existing small businesses in low income neighborhoods. The program is delivered through three separate nonresidential components to serve different customer segments: 1) Income Qualified Multifamily Housing; 2) Affordable Multifamily New Construction; 3) Income Qualified Small Business.

The Income Qualified Multifamily Housing component provides services and incentives to serve the specific needs of multifamily housing building owners and property managers to help improve the overall energy efficiency of their buildings and reduce their operating costs. MidAmerican targets existing income-qualified multifamily housing, institutional housing and emergency shelters. This offering provides comprehensive on-site energy assessments to identify areas of high energy use, free direct installation measures and incentives for measures identified during the assessment. For eligibility, a multifamily property must be at least ten years old and developed under Section 8 of the U.S. Housing Act of 1937 or Low-Income Housing Tax Credit under the Tax Reform Act of 1986, additionally, buildings with the Housing and Urban Development's Sectional Housing Types of Section 202 and Public Housing, and the U.S. Department of Agriculture's Section 515 Rural Rental Housing are eligible. An on-site assessment is available to owners of multifamily buildings that contain four or more units that receive electricity and/or natural gas supplied from MidAmerican.

The Affordable Multifamily New Construction component promotes the design and construction of high-efficiency affordable multifamily properties with enhanced new construction incentives. The program is delivered in partnership with developers, architects, engineering firms and equipment contractors, and provides a mix of technical and financial assistance to help influence projects during the planning stage. For eligibility, a multifamily property must provide documentation of participation in the Iowa Finance Authority (IFA) Housing Tax Credit Program or the National Housing Trust Fund.

The Income Qualified Small Business component will provide enhanced incentives to small businesses identified as being in low income or underserved areas. For eligibility, the small

business must be in a Qualified Census Tract, National Opportunity Zone or community identified as low income or underserved by MidAmerican. The program will focus on retail spaces, restaurants and other community-centric businesses less than 10,000 square feet, in buildings at least ten years old and occupied for at least six months. National accounts or chains are not eligible.

Transportation gas customers with daily metering are ineligible for program gas measures. However, customers with monthly metering under the Monthly Metered Transportation Service gas tariff are eligible for energy efficiency incentives.

Program measures for all components are only available to MidAmerican customers. MidAmerican estimates the total number of customers eligible to participate in the Nonresidential Low Income program is 116,000. Table 52 outlines the customer eligibility requirements.

*Table 52 Nonresidential Low Income Customer Eligibility Parameters*

	<b>Electric Measures</b>	<b>Natural Gas Measures</b>
<b>Customer Class</b>	Residential or nonresidential electric rate	Residential or nonresidential natural gas rate
<b>Customer Status</b>	Building owners; property managers; tenants; small business	Building owners; property managers; tenants; small business
<b>Building Type – Existing</b>	Income qualified multifamily housing and income-eligible small business	Income qualified multifamily housing and income-eligible small business
<b>Building Type – New Construction</b>	Income qualified multifamily housing	Income qualified multifamily housing
<b>Building Size</b>	All	All
<b>Geography</b>	MidAmerican Iowa electric service area	MidAmerican Iowa natural gas service area

Customers participating in the program receive the following main benefits:

- Customers receive reliable energy savings recommendations from trained energy assessors.
- Customers save money in the short term through incentives and in the long term through lower utility bills.
- Customers save energy instantly as a result of the direct install measures.

#### 5.4.1. Measures and Incentives

The Nonresidential Low Income program offers financial incentives to participants through the following offerings:

- Income Qualified Multifamily Housing
  - No-cost energy assessments: No-cost energy assessments are offered to help participants identify how they use energy and what actions can be taken to reduce energy use.
  - No-cost energy efficiency measures: MidAmerican's program contractor installs energy efficiency measures during the assessment, at no cost to the customer.
  - Technical assistance: Technical assistance is provided at no cost to participants. Assistance may include expert information regarding building shell and central heating/cooling plant-specific equipment, recommendations regarding energy-saving actions, estimates of energy-saving potential and general cost estimates for recommended actions.
  - Equipment incentives: Incentives are offered to help offset the cost to purchase and install energy efficient equipment. Income qualified multifamily participants are eligible for enhanced incentives based on the cost effectiveness of measures identified during the on-site assessment. For purposes of evaluating equipment incentive levels, MidAmerican defines cost effective measures as those having a customer payback that is shorter than the expected lifetime of the measure. For cost effective measures, the incentive paid is at least 40 percent of the total installed cost. If the measure does not meet this definition of cost effectiveness, MidAmerican provides an incentive of at least five times the annual energy bill savings.
- Affordable Multifamily New Construction
  - Measures like those offered in the Commercial New Construction program
  -

MidAmerican Energy Company

Application Exhibit 1

- Table 53 provides the proposed per unit incentive which includes a 50 percent bonus compared to the market-rate new construction multifamily offering. This incentive structure is subject to change based on market conditions, participation and changes in energy codes and standards.

*Table 53 Nonresidential Low Income Affordable Multifamily Incentive Structure*

Percent Whole Building Energy Savings Compared to Energy Code	Incentive/Unit
5% - 10% above energy code	\$150
11% - 15% above energy code	\$450
16% - 20% above energy code	\$750
21% - 25% above energy code	\$1,050
26% - 30% above energy code	\$1,350
31% and greater above energy code	\$1,650

- Income Qualified Small Business
  - Program measures will be like the Nonresidential Energy Solutions Small Business Express offering including free energy assessment
  - Projects identified during the assessment will be presented at an enhanced incentive

MidAmerican offers incentives for the current program year until approved funds are exhausted or until December 31 of each program year, whichever comes first. MidAmerican performs an annual review of qualifying measures, incentive levels and performance criteria and may adjust measures, eligibility requirements and incentives as market conditions change and equipment standards change. This may include customer and project incentive caps, temporary reduction or suspension of incentives to appropriately manage program costs and the equitable distribution of incentives.

#### 5.4.2. Budgets

Anticipated five-year spending for the Nonresidential Low Income program is provided in Table 54.

*Table 54 Nonresidential Low Income Budget*

Electric Spending	Administrative Cost	Incentive Cost	Total Cost
2024	\$538,746	\$1,431,881	\$1,970,627
2025	\$590,313	\$1,419,891	\$2,010,204
2026	\$674,294	\$1,626,285	\$2,300,579
2027	\$690,436	\$1,863,055	\$2,553,491
2028	\$752,457	\$2,037,206	\$2,789,663
Total	\$3,246,246	\$8,378,318	\$11,624,564



Gas Spending	Administrative Cost	Incentive Cost	Total Cost
2024	\$144,962	\$390,113	\$535,075
2025	\$151,958	\$386,798	\$538,755
2026	\$170,392	\$434,850	\$605,242
2027	\$184,959	\$502,999	\$687,958
2028	\$182,352	\$504,987	\$687,339
Total	\$834,622	\$2,219,746	\$3,054,369
Total Spending	Administrative Cost	Incentive Cost	Total Cost
2024	\$683,709	\$1,821,994	\$2,505,702
2025	\$742,271	\$1,806,689	\$2,548,959
2026	\$844,685	\$2,061,135	\$2,905,820
2027	\$875,395	\$2,366,054	\$3,241,449
2028	\$934,809	\$2,542,193	\$3,477,001
Total	\$4,080,868	\$10,598,064	\$14,678,932

Detailed budgets by spending category and staffing assumptions in FTEs for this program are provided in Application Exhibit 4 Budget Accounting for Costs.

#### 5.4.3. Energy Savings

Anticipated energy savings for the Nonresidential Low Income program are provided in Table 55.

*Table 55 Nonresidential Low Income Energy Savings*

Electric Savings	Annual kWh	Peak kW
2024	5,305,789	972
2025	4,196,707	678
2026	5,391,801	867
2027	6,597,985	1,058
2028	7,822,676	1,253
Total	29,314,959	N/A
Gas Savings	Annual Therms	Peak Therms
2024	68,181	723
2025	43,830	404
2026	48,160	437
2027	52,443	469
2028	56,680	501
Total	269,294	N/A

#### 5.4.4. Participation

Participation estimates for each measure offered in this program are provided in Application Exhibit 7 Measure Level Details.

#### 5.4.5. Cost Effectiveness

Anticipated total net economic benefits of the program are provided in Table 56.

*Table 56 Nonresidential Low Income Cost Effectiveness*

Program	Electric	Gas	Total
Program Benefits	\$31,859,351	\$2,956,851	\$34,816,201
Program Costs	\$11,197,444	\$2,906,048	\$14,103,492
Net Economic Benefits	\$20,661,906	\$50,803	\$20,712,709
Societal Test Ratio	2.85	1.02	2.47

#### 5.4.6. Operations

MidAmerican provides a comprehensive program designed to reach income qualified multifamily housing building owners and managers, and small business owners in low income identified communities. Each component of the program employs a different implementation strategy, as outlined below.

The Income Qualified Multifamily Housing component is available to existing income qualified multifamily housing, institutional housing, and emergency shelters. Energy assessments are performed by a program contractor with expertise in building envelope, common area energy-using equipment and energy use within the apartments units themselves. Recommendations and energy efficiency program information are provided to assist property owners in completing projects and obtaining available incentives. Key steps in the implementation of the Income Qualified Multifamily Housing component are as follows:

- **Scheduling/Screening:** The customer calls the program contractor to schedule an assessment. The program contractor screens the caller to determine the number of units or buildings in a complex, income qualifications, central or individual heating and cooling systems, any specialized commercial equipment and residential or commercial utility meter(s).
- **On-site energy assessment completion:** The program contractor performs an energy assessment walkthrough to visually inspect energy-using equipment, informs building owners of ways to operate building energy systems more

efficiently, evaluates eligibility for financial incentives and provides contact information and information regarding how to participate in MidAmerican's other energy efficiency programs.

- Energy assessment report: The program contractor provides an assessment report which recommends energy efficiency measures such as improvements to the building shell, central heating and cooling equipment, and lighting in common areas and in tenant-occupied spaces.
- Air infiltration and direct-install measures: The program contractor installs energy-saving measures within common areas and individual apartment units. In addition, the program contractor identifies if the building is a proper candidate for air sealing and attic insulation measures. If the building qualifies, the property owner/manager is notified, and the installation is scheduled.
- Implementation support: The program contractor provides continuous energy advising services to help convert energy efficiency recommendations into completed projects.
- Verification: The program contractor may conduct verification activities on existing equipment prior to installation or post-installation prior to payment.
- Incentive processing and database maintenance: When a customer completes a project as a result of their assessment, they submit a completion form for review and processing.

The operations for the Affordable Multifamily New Construction component are similar to the Commercial New Construction program and are detailed in section 5.3.6 Commercial New Construction Operations.

The operations of the Income Qualified Small Business component are similar to the Small Business Express component of the Nonresidential Energy Solutions program and are detailed in section 5.2.6 Nonresidential Energy Solutions Operations.

MidAmerican staff provides overall strategic direction for the program, as well as conducts research and development, promotion, trade ally support, evaluation, and other administrative functions.

The program is delivered through the assistance of program contractors that provide energy design assistance, energy analysis, energy management education, project management, verification, and information technology services. The contractors also help MidAmerican strengthen relations with key trade allies and assists with data tracking and incentive processing.

MidAmerican currently contracts with The Energy Group for management and administrative services for the Income Qualified Multifamily Housing component. Affordable Multifamily New Construction and Income Qualified Small Business are new offerings, but current contractors Willdan Group, Inc. and Resource Innovations manage similar market-rate programs. MidAmerican regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process. MidAmerican will issue a request for proposal in 2023 for this program.

#### 5.4.7. Market Barriers

Table 57 presents the key market barriers to an effective Nonresidential Low Income program and strategies the program uses to address each barrier. These program strategies may only partially offset the identified barriers.

*Table 57 Nonresidential Low Income Market Barriers and Strategies*

Market Barriers	Program Strategies
Higher initial cost of energy efficient equipment	Provide direct installation of measures Provide free energy assessment and design assistance Educate customers on the long-term energy cost saving benefits of higher efficiency equipment Support leveraging additional funds through state and federal funding
Lack of customer awareness	Provide customer marketing and outreach Provide efficiency and energy usage education Provide free energy assessments Work with communities and state organizations
Customers reluctant to ask for help	Work with communities and state organizations which have existing relationships with customers Provide confidential program qualification and implementation process
Limited time and information to consider efficiency in emergency replacement	Conduct targeted trade ally outreach and training Engage in ongoing trade ally communications and education Implement efficient program requirements
Lack of building owner and trade ally awareness	Educate building owners through program promotion/advertising Use traditional and nontraditional marketing approaches Engage in ongoing trade ally outreach and training

Market Barriers	Program Strategies
Split incentive (i.e., rental property owners own the building, but the tenants pay the utility bills)	Provide financial incentives for energy efficiency upgrades Provide free energy assessments Educate landlords about increasing property values and greater demand for units resulting from energy upgrades Focus on individual units and common areas
Energy is a small part of overall operating costs	Target new purchases and equipment replacement markets Target marketing materials and education efforts
Building owners often choose to use their limited resources to make capital improvements to items seen by their tenants/customers (e.g., paint, floor coverings, decorations)	Educate the building owner on the importance of energy-related capital improvements such as heating and cooling improvements and efficient lighting products

#### 5.4.8. Marketing and Promotion

MidAmerican will target multifamily building owners and manager and small business owners using traditional and nontraditional marketing channels and provide education and outreach to customers, trade allies, distributors, contractors and community, state and industry organizations to encourage customer participation and implementation of energy efficient measures and equipment. Additionally, MidAmerican business and community development managers will promote the programs to communities and customers in their customer interactions.

MidAmerican will engage in a multifaceted promotional strategy, including:

- Direct outreach to multifamily and small business building owners, architectural and engineering firms, builders, developers and trade allies
- Direct outreach through MidAmerican business and community development managers, architectural and engineering firms, builders and developers
- Direct outreach to specific customer types/classes for specific campaigns
- Direct outreach to community, state and industry organizations
- Direct outreach to landlord associations by attending trade shows, educational seminars and lunch and learn meetings to make them aware of the program offerings
- Ongoing trade ally education about program procedures and benefits, qualifying measures and incentive structures

- Attendance and program promotion at industry, community and organization/association events
- Promotional and educational activities, such as workshops and presentations for customers, as well as other stakeholders in the nonresidential building community
- Periodic articles in MidAmerican's monthly electronic newsletter and its quarterly newsletter sent with customer bills
- A dedicated webpage that includes program information, qualification requirements and a program brochure/fact sheet
- Utilization of social media channels

Trade allies play a key role in implementing the program. To support its trade allies and keep them informed of program opportunities and changes, MidAmerican's energy efficiency website assists trade allies in marketing and delivering energy efficient products and services to customers, while encouraging energy efficiency program participation. MidAmerican's Trade Ally Central website offers trade allies the opportunity to download program materials, learn about program changes and provide contact information for future communications. MidAmerican will periodically provide program information and training via a variety of different communication modes to create overarching energy efficiency and program awareness among our customers and trade allies. Further information regarding trade allies is in section 6.1 Education.

MidAmerican will regularly review and update customer-facing program information and marketing materials as part of its internal program evaluation process, and adjust materials as needed based on program adjustments and market characteristics.

## 6. Multi-Sector and Other Energy Efficiency Programs

### 6.1. Education

The Education program promotes residential and nonresidential energy efficiency education through activities organized into four components: 1) School Curricula; 2) Awareness; 3) Trade Ally Support; and 4) Small Business Energy Reports.

The School Curricula component works with schools to integrate energy efficiency education into curriculum and extracurricular activities. MidAmerican will continue to offer this education component to elementary and middle school educators, students, and students' families throughout the service area by providing interactive website tools and energy efficiency curriculum materials.

The Awareness component engages in several activities to increase energy efficiency awareness including:

- MidAmerican's energy efficiency website
- Customer communication through social media, email and newsletters
- Educational materials promoting energy efficiency benefits and programs
- Outreach at events like the Iowa State Fair, community events, home and trade shows
- Sponsoring presentations and demonstrations to employees of large account customers and in town hall meetings, community group presentations and other venues
- Customer support through MidAmerican's business connections managers, business and community development managers, and its call center
- Participating in local energy education events
- Leveraging educational and cross-promotional opportunities available through MidAmerican's existing energy efficiency programs
- MidAmerican's trade ally outreach program

The Trade Ally Support component engages in several activities to fully inform trade allies of program changes and encourage trade allies to promote MidAmerican's energy efficiency programs. MidAmerican currently offers a wide range of support services to its trade allies, including a Trade Ally Network website, dedicated support staff, formal and informal training, personal communication through in-person meetings, focus groups, phone calls, email, newsletters, and advertising support.

MidAmerican recognizes that engaging with and encouraging energy efficiency improvements for small business is a challenge. To increase outreach to this sector, MidAmerican will introduce a Small Business Energy Report component in this Plan. The energy report will be emailed to small business customers on a monthly or bi-monthly basis providing information on their energy use and promote energy efficiency programs and incentives.

Customer targets include all residential and nonresidential customers. MidAmerican estimates the total number of customers eligible to participate in the Education program is 860,000.

Table 58 outlines the customer eligibility requirements.



*Table 58 Education Customer Eligibility Parameters*

	Electric Customers	Natural Gas Customers
<b>Customer Class</b>	Residential or nonresidential electric rate	Residential or nonresidential natural gas rate
<b>Customer Status</b>	No restrictions	No restriction
<b>Building Type – Existing</b>	No restrictions	No restriction
<b>Building Type – New Construction</b>	No restrictions	No restriction
<b>Building Size</b>	No restrictions	No restriction
<b>Geography</b>	MidAmerican Iowa electric service area	MidAmerican Iowa natural gas service area

**6.1.1. Measures and Incentives**

There are no incentives or measures that receive incentives in this program.

**6.1.2. Budgets**

Anticipated five-year spending for the Residential Education program is provided in Table 59 and Table 60 for the Nonresidential Education program.

*Table 59 Residential Education Budget*

Electric Spending	Administrative Cost	Incentive Cost	Total Cost
2024	\$586,130	\$0	\$586,130
2025	\$967,050	\$0	\$967,050
2026	\$1,009,460	\$0	\$1,009,460
2027	\$972,203	\$0	\$972,203
2028	\$933,440	\$0	\$933,440
Total	\$4,468,285	\$0	\$4,468,285
Gas Spending	Administrative Cost	Incentive Cost	Total Cost
2024	\$337,370	\$0	\$337,370
2025	\$353,200	\$0	\$353,200
2026	\$358,628	\$0	\$358,628
2027	\$402,814	\$0	\$402,814
2028	\$398,603	\$0	\$398,603
Total	\$1,850,613	\$0	\$1,850,613

Total Spending	Administrative Cost	Incentive Cost	Total Cost
2024	\$923,500	\$0	\$923,500
2025	\$1,320,250	\$0	\$1,320,250
2026	\$1,368,088	\$0	\$1,368,088
2027	\$1,375,017	\$0	\$1,375,017
2028	\$1,332,043	\$0	\$1,332,043
Total	\$6,318,898	\$0	\$6,318,898

*Table 60 Nonresidential Education Budget*

Electric Spending	Administrative Cost	Incentive Cost	Total Cost
2024	\$595,330	\$0	\$595,330
2025	\$772,290	\$0	\$772,290
2026	\$813,650	\$0	\$813,650
2027	\$772,290	\$0	\$772,290
2028	\$730,330	\$0	\$730,330
Total	\$3,683,890	\$0	\$3,683,890

  

Gas Spending	Administrative Cost	Incentive Cost	Total Cost
2024	\$191,670	\$0	\$191,670
2025	\$217,760	\$0	\$217,760
2026	\$223,978	\$0	\$223,978
2027	\$251,944	\$0	\$251,944
2028	\$246,541	\$0	\$246,541
Total	\$1,131,893	\$0	\$1,131,893

  

Total Spending	Administrative Cost	Incentive Cost	Total Cost
2024	\$787,000	\$0	\$787,000
2025	\$990,050	\$0	\$990,050
2026	\$1,037,628	\$0	\$1,037,628
2027	\$1,024,234	\$0	\$1,024,234
2028	\$976,871	\$0	\$976,871
Total	\$4,815,783	\$0	\$4,815,783

Detailed budgets by spending category and staffing assumptions in FTEs for this program are provided in Application Exhibit 4 Budget Accounting for Costs.

### 6.1.3. Energy Savings

There are no electric or gas savings associated with this program.

#### 6.1.4. Cost Effectiveness

Anticipated total net economic benefits for the Residential Education program are provided in Table 61 and

Table 62 for the Nonresidential Education program.

*Table 61 Residential Education Cost Effectiveness*

Program	Electric	Gas	Total
Program Benefits	\$0	\$0	\$0
Program Costs	\$4,265,217	\$1,769,049	\$6,034,266
Net Economic Benefits	(\$4,265,217)	(\$1,769,049)	(\$6,034,266)
Societal Test Ratio	-	-	-

*Table 62 Nonresidential Education Cost Effectiveness*

Program	Electric	Gas	Total
Program Benefits	\$0	\$0	\$0
Program Costs	\$3,522,920	\$1,081,191	\$4,604,111
Net Economic Benefits	(\$3,522,920)	(\$1,081,191)	(\$4,604,111)
Societal Test Ratio	-	-	-

#### 6.1.5. Operations

Each component in the Education program employs a different implementation strategy.

The School Curricula component provides curricula and other activities for use by schools. Key steps in the implementation of the School Curricula component are as follows:

- Identifying curriculum and other educational activities appropriate to MidAmerican's service territory
- Developing and implementing marketing and communications strategies appropriate to each activity
- Contacting teachers and administration officials to make them aware of the offerings
- Fulfilling orders for materials from schools
- Delivering activities through schools in MidAmerican's service area
- Evaluating the effectiveness of each activity

The Awareness component provides several activities to increase energy efficiency awareness among customers and trade allies. Awareness and outreach can include a broad range of activities including social media, educational materials, and customer support. Program operation steps may vary by program. Key steps in the implementation of the Awareness component are as follows:

- Planning for awareness activities such as participation in events, social media campaigns, presentations, and other activities
- Coordinating activities with partners and contractors
- Developing materials such as media publications, brochures and other materials
- Developing and implementing marketing strategies appropriate to each activity
- Evaluating the effectiveness of each activity
- Enhancing customer and trade ally communications on incentive processing and notification

The Trade Ally Support component provides several activities to support trade allies. Key steps in the implementation of the Trade Ally Support component vary by activity, but generally include:

- Managing communications channels and attending meetings, events, and other activities
- Outreach to and communication with trade allies
- Coordinate activities with partners and contractors
- Evaluation of the effectiveness of each activity

The Small Business Energy Report component will deliver targeted messages via emailed energy reports to participating customers. The reports include messaging with energy usage information, energy efficiency tips and information on energy efficiency programs. Messages will be updated and refreshed to motivate customers to act. Key steps in the implementation of the Small Business Energy Report component are as follows:

- Provide data: MidAmerican supplies the program contractor with weekly data feeds for all Iowa nonresidential customers to ensure energy usage information shown on the report matches energy usage information shown on the customer bill.
- Establish participant groups: The program contractor will identify small business customers by energy usage and create participant groups.
- Email reports: The program contractor emails reports to the participation group.

- Manage operations: MidAmerican's call center answers participant questions by phone and email.

MidAmerican staff provides overall strategic direction for the program, as well as conducts research and development, promotion, evaluation, and other administrative functions.

The Education program is delivered through the assistance of program contractors. MidAmerican currently contracts with Culver Company, LLC for School Curricula development services, Flynn Wright for Awareness services and Resource Innovations for Trade Ally Support. The Small Business Energy Report component is new, however current contractor Oracle/Opower performs a similar service for the Residential Behavioral program. MidAmerican regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process. MidAmerican will issue a request for proposal in 2023 for this program.

#### 6.1.6. Market Barriers

Table 63 presents the key market barriers to an effective Education program and strategies the program uses to address each barrier. These program strategies may only partially offset the identified barriers.

*Table 63 Education Market Barriers and Strategies*

Market Barriers	Program Strategies
Lack of customer awareness of educational opportunities	Outreach through traditional and nontraditional mechanisms Cross-promote programs when possible Participate in industry, community and organization/association events
Lack of time and resources to participate	Provide full subsidies for educational opportunities Streamline programs to ensure efficient use of participants' time Provide Trade Ally Ambassador support
Lack of profitability for education providers attempting to develop programs for local market	Leverage programs and curricula created by national organizations
Perceived lack of value from the Trade Ally Network	Educate trade allies on the value and benefits of participating in the Trade Ally Network Provide easy-to-use resources and tools Offer recognition opportunities, testimonials, case studies and value statements

Market Barriers	Program Strategies
Participant lack of confidence in the Small Business Energy Report and MidAmerican's motives for sending the reports	<p>Participant education and outreach</p> <p>Train call center representatives to answer frequently asked questions and reassure participants</p> <p>Include "Welcome" module in the first energy report to explain the report and resources</p> <p>Revise language in the energy reports when appropriate to help minimize complaints and misunderstandings</p>

### 6.1.7. Marketing and Promotion

The Education program is available to all customers and trade allies throughout the Iowa service territory. MidAmerican follows a comprehensive marketing plan that includes traditional and nontraditional marketing strategies for its entire portfolio, as well as for individual energy efficiency programs. MidAmerican will engage in a multifaceted promotional strategy, including:

- Direct outreach through business connections managers, business and community development manager and a network of trade allies
- Direct outreach to specific customer types/classes for specific campaigns
- Direct outreach to targeted trade allies with Trade Ally Ambassadors
- Ongoing trade ally education about program procedures and benefits, qualifying measures, and incentive structures
- Program promotion at industry, community, and organization/association events
- Periodic articles in MidAmerican's electronic newsletters and its quarterly newsletter included with customer bills
- Utilization of social media channels
- Dedicated online content that includes program information and qualification requirements
- Customer and trade ally program materials, fact sheets and general low/no-cost tips
- A search tool for customers and trade allies
- Educational or program specific bill inserts and bill messaging
- Energy efficiency educational materials for school curriculum

## 6.2. Trees

The Trees program promotes tree planting through the Trees Please! offering. The program provides annual grants for community tree planting projects. Any municipality in MidAmerican's

service area may submit a grant request annually for tree planting projects in common areas such as publicly owned properties and city-owned rights of way. Communities may receive enhanced grants through the program to recover from a natural disaster. Communities are given information on the benefits of planting trees in an energy efficient landscape, and they are directed to the website to learn more about other MidAmerican energy efficiency programs available in Iowa.

Customer targets include all communities in MidAmerican's Iowa service area, or approximately 360 communities. Table 64 outlines the customer eligibility requirements.

*Table 64 Trees Customer Eligibility Parameters*

	Electric Measures	Natural Gas Measures
<b>Customer Class</b>	Governmental	Governmental
<b>Customer Status</b>	Public-owned properties	Public-owned properties
<b>Building Type – Existing</b>	N/A	N/A
<b>Building Type – New Construction</b>	N/A	N/A
<b>Building Size</b>	N/A	N/A
<b>Geography</b>	MidAmerican Iowa electric service area	MidAmerican Iowa natural gas service area

#### 6.2.1. Measures and Incentives

The Trees program offers financial incentives to participants in the form of grants. Grants in amounts ranging from \$1,000 to \$5,000 are distributed to municipalities. The municipality applying for the grant funds must provide 50 percent cost-sharing, either in cash or through in-kind services. The Trees program provides grants for the Trees Please! measure

MidAmerican offers incentives for the current program year until approved funds are exhausted or until December 31 of each program year, whichever comes first. MidAmerican performs an annual review of incentive levels and performance criteria and may adjust incentives as market conditions change. This may include temporary reduction or suspension of incentives to appropriately manage program costs.

#### 6.2.2. Budgets

Anticipated five-year spending for the Trees program is provided in

Table 65.



Table 65 Trees Budget

Electric Spending	Administrative Cost	Incentive Cost	Total Cost
2024	\$28,922	\$75,000	\$103,922
2025	\$83,262	\$75,000	\$158,262
2026	\$28,922	\$75,000	\$103,922
2027	\$28,922	\$75,000	\$103,922
2028	\$28,922	\$75,000	\$103,922
Total	\$198,950	\$375,000	\$573,950
Gas Spending	Administrative Cost	Incentive Cost	Total Cost
2024	\$14,300	\$37,500	\$51,800
2025	\$21,638	\$37,500	\$59,138
2026	\$14,300	\$37,500	\$51,800
2027	\$14,300	\$37,500	\$51,800
2028	\$14,300	\$37,500	\$51,800
Total	\$78,838	\$187,500	\$266,338
Total Spending	Administrative Cost	Incentive Cost	Total Cost
2024	\$43,222	\$112,500	\$155,722
2025	\$104,900	\$112,500	\$217,400
2026	\$43,222	\$112,500	\$155,722
2027	\$43,222	\$112,500	\$155,722
2028	\$43,222	\$112,500	\$155,722
Total	\$277,788	\$562,500	\$840,288

Detailed budgets by spending category and staffing assumptions in FTEs for this program are provided in Application Exhibit 4 Budget Accounting for Costs.

### 6.2.3. Energy Savings

There are no gas or electric savings associated with this program.

### 6.2.4. Participation

Participation estimates for each measure offered in this program are provided in Application Exhibit 7 Measure Level Details.

### 6.2.5. Cost Effectiveness

Pursuant to 199 IAC 35.5(4)“c”, tree planting programs shall not be tested for cost-effectiveness, unless the utility wishes to present the results of cost-effectiveness tests for

informational purposes. At this time, MidAmerican has not tested its tree planting programs for cost-effectiveness and does not have any results to present for informational purposes.

#### 6.2.6. Operations

Key steps in the implementation of the Trees program are as follows:

- Grant requests: Grant information is distributed to city administrators and community leaders each fall, including detailed instructions on program operation and participation, and a grant application.
- Cross promotion: Communities are directed to MidAmerican's energy efficiency website to learn more about MidAmerican's energy efficiency programs.
- Grant application review and processing: Grant applications are reviewed and approved for projects in community spaces, schools, or other public property.
- Check delivery: Checks are delivered to recipients.
- Recipient reporting: Recipients submit a report to MidAmerican detailing project progress and plans for completion. Recipients must complete the project and submit a final report to be eligible for future grant funding.
- Support: A dedicated trees phone number and email address is available for customers to contact MidAmerican staff directly with specific questions related to the Trees program.

MidAmerican staff provides implementation and strategic direction for the program, conducts research and development, and provides promotion, evaluation, and other administrative functions. An outside program contractor is not used in the Trees program.

#### 6.2.7. Market Barriers

Table 66 presents the key market barriers to an effective Trees program and strategies the program uses to address each barrier. These program strategies may only partially offset the identified barriers.

*Table 66 Trees Market Barriers and Strategies*

Market Barriers	Program Strategies
Lack of customer awareness	Identify municipalities that do not participate in Trees program and send program information
Lack of customer awareness of proper tree selection and planting practices	Provide information on proper tree planting and care

Market Barriers	Program Strategies
Lack of customer awareness of program purpose to plant trees for energy efficiency benefits	Improve communication and awareness for energy efficiency benefits on grant applications

### 6.2.8. Marketing and Promotion

The Trees program is promoted through annual direct mail or email to community leaders that includes program information and grant application packages. MidAmerican's website provides program contact information and general tree planting education.

MidAmerican will engage in a multifaceted promotional strategy, including:

- Press releases
- Utilization of social media channels
- Periodic articles in MidAmerican's electronic newsletters and its quarterly newsletter sent with customer bills
- A dedicated webpage that includes program information and qualification requirements

This program also helps cross-promote other energy efficiency programs by directing customers to the energy efficiency website and by offering brochures, flyers and tips on how to save energy and money for their home and in their community.

## 6.3. Pilot Programs

MidAmerican is not proposing any pilot programs at this time but may reconsider offering pilot programs during this Plan period if such opportunities offer potential new savings or other benefits for customers.

## 7. Demand Response Programs

### 7.1. Residential Load Management

The Residential Load Management program, marketed as SummerSaver, provides financial incentives to residential customers in exchange for allowing MidAmerican to control their central air conditioning on summer days when MidAmerican forecasts the possibility of setting a system peak demand or when called upon by MidAmerican's regional transmission organization, the Midcontinent Independent Transmission Operator, Inc (MISO). These occurrences are referred to as events. The program reduces the peak demand for electricity by cycling participants' air

conditioners or air-source heat pumps during an event using a currently installed load control receiver (LCR), or by adjusting the temperature on an enrolled smart thermostat. LCR participation will be phased out as devices are removed due to failure, reaching its useful life or at the customer's request. Any new participation to the program will be via a qualifying smart thermostat that the customer has purchased and installed on their own (referred to as Bring Your Own Thermostat – BYOT). Customers participating with an LCR that is scheduled to be removed will be encouraged to continue participation through a qualifying smart thermostat.

MidAmerican Iowa residential electric customers who live in single-family homes (detached or attached – includes condos, duplexes and townhomes) and have a qualifying central air conditioning or air-source heat pump system in good working order with demonstrated usage are eligible for the program. MidAmerican targets the following customers:

- Residential customers with average monthly summer electricity usage of 750 kWh or greater
- Customers with a qualifying smart thermostat
- Customers moving into homes previously enrolled in the program
- Customers previously enrolled in the program moving to new homes in MidAmerican's service territory
- Customers who have taken advantage of the Residential Equipment smart thermostat incentive

MidAmerican estimates the total number of customers eligible to participate in the Residential Load Management program is 515,000. Table 67 outlines the customer eligibility requirements.

*Table 67 Residential Load Management Customer Eligibility Parameters*

	Electric Measures	Natural Gas Measures
<b>Customer Class</b>	Residential electric rate	N/A
<b>Customer Status</b>	Customer homeowners	N/A
<b>Building Type – Existing</b>	Single-family homes	N/A
<b>Building Type – New Construction</b>	Single-family homes	N/A
<b>Building Size</b>	N/A	N/A
<b>Geography</b>	MidAmerican Iowa electric service area	N/A

Customers participating in this program receive the following benefits:

- Financial benefits in the form of annual incentive payments that reward them for participation
- Minimization of environmental impacts of their energy usage by reducing demand during peak periods
- Contribution to local and regional reliability by reducing demand during peak periods

#### 7.1.1. Measures and Incentives

The Residential Load Management program provides incentives for the following measures:

- Qualifying, self-installed smart thermostats
- Previously installed LCR for central air conditioner or air-source heat pump cycling

The program offers financial incentives in the form of an annual bill credit on customers' October or November utility bill at the completion of the cooling season. Incentive amounts per measure are:

- Smart thermostat participants: \$40/season
- Existing LCR participants: \$20/season

MidAmerican performs an annual review of qualifying measures and may adjust measures and eligibility requirements in the future as market conditions and equipment standards change.

#### Budgets

Anticipated five-year spending for the Residential Load Management program is provided in Table 68.

*Table 68 Residential Load Management Budget*

Electric Spending	Administrative Cost	Incentive Cost	Total Cost
2024	\$1,073,986	\$1,920,330	\$2,994,316
2025	\$1,178,059	\$2,017,280	\$3,195,339
2026	\$1,468,848	\$2,114,230	\$3,583,078
2027	\$1,417,598	\$2,211,180	\$3,628,778
2028	\$1,494,559	\$2,308,130	\$3,802,689
Total	\$6,633,049	\$10,571,150	\$17,204,199

There are no gas costs associated with this program. Detailed budgets by spending category and staffing assumptions in FTEs for this program are provided in Application Exhibit 4 Budget Accounting for Costs.

### 7.1.2. Energy Savings

Anticipated energy savings for the Residential Load Management program are provided in Table 69.

*Table 69 Residential Load Management Savings*

Electric Savings	Annual kWh	Peak kW
2024	294,180	66,350
2025	341,730	79,050
2026	389,280	91,750
2027	436,830	104,450
2028	484,380	117,150
Total	1,946,400	N/A

### 7.1.3. Participation

Participation estimates for each measure offered in this program are provided in Application Exhibit 7 Measure Level Details.

### 7.1.4. Cost Effectiveness

Anticipated total net economic benefits of the program are provided in Table 70.

*Table 70 Residential Load Management Cost Effectiveness*

Program	Electric	Total
Program Benefits	\$89,536,863	\$89,536,863
Program Costs	\$16,436,467	\$16,436,467
Net Economic Benefits	\$73,100,396	\$73,100,396
Societal Test Ratio	5.45	5.45

### 7.1.5. Operations

Residential Load Management participants agree to allow MidAmerican to control their cooling equipment during the summer months (June through September). When an event is called, customers participating through a previously installed LCR will have their cooling systems

cycled. LCRs operate by overriding customers' thermostats and shutting down the outdoor compressor but allowing the furnace fan to continue circulating previously cooled indoor air. MidAmerican activates LCR events through a pager network. Customers participating with a qualifying smart thermostat will have the temperature remotely adjusted by the thermostat's manufacturer during an event. When applicable, the manufacturer will conduct pre-cooling prior to the event to ease customer discomfort. Residential Load Management events can be held weekdays between 2:00 and 7:00 p.m. (excluding holidays). Key steps in the implementation of the Residential Load Management program are as follows:

- Solicit participants: Promoting the program through various marketing channels. Contact customers moving into or out of homes that participate in the program to encourage participation in their new home. Promote the program to customers participating in the smart thermostat incentive through the Residential Equipment program.
- Enrollment: Enrolling new smart thermostat participants
- Verify equipment: Determining if the registered smart thermostat will respond to a cycling event
- Manage events: Managing events during the summer season
- Manage LCRs: Servicing, maintaining, and removing installed LCRs
- Process incentives: Processing incentives through check payments or year-end bill credits through the billing system

MidAmerican staff provides overall strategic direction for the program, conducts research and development, and provides promotion, trade ally support, evaluation, and other administrative functions.

MidAmerican's program contractor answers customer questions using a dedicated toll-free phone line, tracks program data, operates program software and hardware systems and helps coordinate incentives with MidAmerican's billing and accounts payable departments. The program contractor is responsible for maintaining and removing LCRs in the field. The program contractor provides oversight and is a liaison between MidAmerican and the smart thermostat manufacturer(s), verifying data transfers between manufacturer(s) and MidAmerican.

MidAmerican currently contracts with CLEAResult for administrative services and procures statewide 900 MHz simulcast paging services from American Messaging. MidAmerican utilizes Cannon Technologies Inc., a division of Eaton Corporation, LLC, for LCRs and the associated LCR software systems and support. MidAmerican regularly reviews its contractor

needs and contractual agreements as part of its internal program evaluation process. MidAmerican will issue a request for proposal in 2023 for this program.

#### 7.1.6. Market Barriers

Table 71 presents the key market barriers to an effective Residential Load Management program and strategies the program uses to address each barrier. These program strategies may only partially offset the identified barriers.

*Table 71 Residential Load Management Market Barriers and Strategies*

Market Barriers	Program Strategies
Lack of customer awareness	Consumer education and outreach Program promotion/advertising Promotion through other residential programs
Concern that participation will result in homes being too hot during cycling events	Customer education and outreach Smart thermostat pre-cooling
Negative opinion of program expressed by heating/cooling contractors to customers concerning LCR equipment	Ongoing dealer communications, outreach and education
Concern over allowing outside control of smart thermostat	Program education Use of aggregated usage data that is not specific to any one customer

#### 7.1.7. Marketing and Promotion

The Residential Load Management program is promoted using traditional and nontraditional marketing channels and provides education and outreach to customers and trade allies. MidAmerican will engage in a multifaceted promotional strategy, including:

- Direct physical and/or electronic mailings to recruit and retain program participants
- Smart thermostat manufacturer notification when registering their thermostat
- Periodic articles in MidAmerican's monthly electronic newsletter, as well as its quarterly newsletter sent with customer bills
- A dedicated webpage that includes program information and qualification requirements
- Educational materials and outreach to trade allies who provide maintenance services or sell HVAC equipment



- Description of the program and benefits on qualifying smart thermostat product listings in the upstream Residential Equipment marketplace
- Utilization of social media channels

To support its trade allies and keep them informed of program opportunities and changes, MidAmerican's energy efficiency website assists trade allies in marketing and delivering energy efficient products and services to customers, while encouraging energy efficiency program participation. MidAmerican's Trade Ally Central website offers trade allies the opportunity to download program materials, learn about program changes and provides contact information for future communications. MidAmerican will periodically provide program information and training via a variety of different communication modes to create overarching energy efficiency and program awareness among our customers and trade allies.

## 7.2. Nonresidential Load Management

The Nonresidential Load Management program provides large nonresidential customers with financial incentives to reduce demand during system peak conditions. Customers must commit to providing a specified amount of load reduction when notified by MidAmerican during one of the curtailment participation periods: summer only (June 1 to September 30) or year round (June 1 to May 31). Customers use various strategies to reduce demand during curtailment events, such as shed load, shift load to non-peak periods or generate replacement power with on-site generators. MidAmerican staff and customers use a software system to monitor load levels in near-real time during curtailment events. Customers also receive ongoing support from their MidAmerican business connections managers to assist them with program compliance and support. The program is marketed to customers as the Curtailment program.

This program targets large electric customers with a minimum of 200 kilowatts of curtailable load during MidAmerican's peak demand periods. These target customers include:

- Customers with on-site generation already installed for emergency purposes
- Industrial customers who can shed or shift process activities from system peak hours
- Customers with energy management systems or other controls that allow them to shift or shed load from system peak hours
- Customers in manufacturing, warehousing, hospitals, government, large offices and data/call centers
- Customers with consistent load patterns
- Sophisticated customers with on-site energy managers

MidAmerican estimates the total number of customers eligible to participate in the Nonresidential Load Management program is 1,500. Table 72 outlines the customer eligibility requirements.

*Table 72 Nonresidential Load Management Customer Eligibility Parameters*

	Electric Measures	Natural Gas Measures
<b>Customer Class</b>	Nonresidential electric rates serving larger customers	N/A
<b>Customer Status</b>	Customer facility or business owners able to provide at least 200 kW of curtailable load	N/A
<b>Building Type – Existing</b>	All	N/A
<b>Building Type – New Construction</b>	All	N/A
<b>Building Size</b>	Able to provide at least 200 kW of curtailable load	N/A
<b>Geography</b>	MidAmerican Iowa electric service area	N/A

#### 7.2.1. Measures and Incentives

The Nonresidential Load Management program provides incentives for the following measures:

- On-site generator(s)
- Shed load
- Shift load to non-peak hours

Incentives are defined based on dollars per contracted kilowatt demand reduction versus achieved kilowatts of reduced demand. Customers are offered contracts in which curtailable load levels are established for all curtailment events. Payment is made at the end of the curtailment season, after MidAmerican evaluates the customer's event performance. Customers delivering curtailed load below that which is required by curtailment contracts receive payment equivalent to the percentage of curtailment achieved for all events. Customers cannot receive more than 100 percent of their contract incentive, even if they deliver curtailed load above their contract requirements. Customers will receive the following incentive per kilowatt curtailed per season:

Participation Period	Incentive Amount
Summer (June 1 – Sept 30)	\$30/kW
Year Round <sup>2</sup> (June 1 – May 31)	\$60/kW

MidAmerican performs an annual review of incentive levels and performance criteria and may adjust incentives in the future as market conditions change.

### 7.2.2. Budgets

Anticipated five-year spending for the Nonresidential Load Management program is provided in Table 73.

*Table 73 Nonresidential Load Management Budget*

Electric Spending	Administrative Cost	Incentive Cost	Total Cost
2024	\$575,014	\$15,690,960	\$16,265,974
2025	\$571,841	\$15,690,960	\$16,262,801
2026	\$730,302	\$15,690,960	\$16,421,262
2027	\$635,302	\$15,690,960	\$16,326,262
2028	\$571,841	\$15,690,960	\$16,262,801
Total	\$3,084,301	\$78,454,800	\$81,539,101

There are no gas costs associated with this program. Detailed budgets by spending category and staffing assumptions in FTEs for this program are provided in Application Exhibit 4 Budget Accounting for Costs.

### 7.2.3. Energy Savings

Anticipated energy savings for the Nonresidential Load Management program are provided in Table 74.

*Table 74 Nonresidential Load Management Savings*

Electric Savings	Annual kWh	Peak kW
2024	739,270	261,516
2025	739,270	261,516
2026	739,270	261,516
2027	739,270	261,516
2028	739,270	261,516
Total	3,696,348	N/A

<sup>2</sup> Year round incentive payment will be based on a weighted average of summer and non-summer demand.

#### 7.2.4. Participation

Participation estimates for each measure offered in this program are provided in Application Exhibit 7 Measure Level Details.

#### 7.2.5. Cost Effectiveness

Anticipated total net economic benefits of the program are provided in Table 75.

*Table 75 Nonresidential Load Management Cost Effectiveness*

Program	Electric	Total
Program Benefits	\$255,086,184	\$255,086,184
Program Costs	\$95,549,683	\$95,549,683
Net Economic Benefits	\$159,536,501	\$159,536,501
Societal Test Ratio	2.67	2.67

#### 7.2.6. Operations

The program is delivered through MidAmerican's energy efficiency, business connections management and electric trading staff. Key steps in the implementation of the Nonresidential Load Management program are as follows:

- Customer information: Customer provides information to MidAmerican regarding curtailment strategy and demonstrates ability to reduce load.
- Program contract: Customer signs a program contract, which describes the rights and responsibilities of customers and MidAmerican in program operations as defined by the curtailment tariff rider.
- System installation: Necessary hardware and software systems that require, at a minimum, the installation of electric meters that can record interval data and communication lines (telephone or Internet TCP/IP) to transmit the interval data to MidAmerican for monitoring and evaluation or the usage of existing building Energy Management System (EMS) to control load.
- Test event: Program operations are tested during an optional mock curtailment event that MidAmerican conducts each year prior to the summer curtailment season.
- Event notice: Notice of curtailment events is provided to customers at least two hours in advance of events, but up to 24 hours in advance.
- Event operation: Curtailment events are triggered by guidelines detailed in MidAmerican's tariff rider and communicated to customers through personal

communications from business connections managers and through monitoring software.

- Physical test event: Customer must participate in an event yearly. If no actual event is called, they must participate in a physical test event by a stated time period.
- Performance evaluation: Customer and program performance is evaluated after the customer's chosen curtailment season.
- Incentive processing: Incentives are calculated, and curtailment payments are processed and delivered directly to customers.

Participants are required to provide a dedicated meter data communication line (telephone or Internet TCP/IP) to use MidAmerican's web-based software application for monitoring electric loads and curtailment performance in near-real time during curtailment events. This software also includes energy analysis modules that can help customers track and manage energy consumption and costs throughout the year. These additional modules are provided at no cost to customers. Customers may also choose to install additional systems to help their facilities meet their curtailment requirements (e.g., generators, control systems). Under the terms of the tariff, customers that do not fully meet their contract requirements may be penalized by MidAmerican or removed from the program.

MidAmerican energy efficiency staff provide overall strategic direction for the program, including research and development, promotion, trade ally support, evaluation, and other administrative functions.

MidAmerican utilizes the Schneider Electric Energy Profiler Online Curtailment Event Manager web-based data management software application. MidAmerican regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process. MidAmerican may issue a request for proposal in 2023 for all components in this program.

#### 7.2.7. Market Barriers

MidAmerican Energy Company

Application Exhibit 1

Table 76 presents the key market barriers to an effective Nonresidential Load Management program and strategies the program uses to address each barrier. These program strategies may only partially offset the identified barriers.

*Table 76 Nonresidential Load Management Market Barriers and Strategies*

Market Barriers	Program Strategies
Customers incur costs, lose revenue and experience operational disruptions when curtailing load	Provide financial incentives Work with customer to identify effective curtailment strategies Provide case study examples of successful curtailment strategies, including shed, shift and generate
Program requirements not well understood	Provide program information, contracts and tariffs that clearly explain program requirements Provide ongoing support from business connections managers and program implementation staff to help customers understand program requirements
Lack of customer awareness	Targeted marketing campaign Use other nonresidential programs to recruit eligible curtailment prospects
Customers do not understand their peak demand loads or potential to curtail	Work with customers to analyze summer and non-summer peak load data Provide engineering assistance if needed, through Nonresidential Energy Solutions program

### 7.2.8. Marketing and Promotion

The Nonresidential Load Management program is primarily promoted to large commercial and industrial customers through one-on-one interaction with business connections managers. It is also promoted on a program-specific webpage on MidAmerican's energy efficiency website and through a filed tariff.

## 8. Support Functions

### 8.1. Monitoring and Verification Plan – Portfolio Review

MidAmerican will contract with an independent third-party energy efficiency program evaluator to conduct analyses of MidAmerican's energy efficiency portfolio across all states it serves. MidAmerican will review with the Iowa Office of Consumer Advocate and other interested Iowa stakeholders any requests for proposals to be issued to obtain the services of the third-party evaluator and will consult with these groups on the selection of the third-party evaluator. A full analysis of each program will be conducted once during the 2024-2028 energy efficiency plan. The analyses will consist of a process review and an impact review of each of MidAmerican's energy efficiency programs.

### 8.1.1. Process Review

The primary goals of the process reviews will be to provide actionable recommendations to MidAmerican to improve the design and implementation of its energy efficiency programs and to develop a best-in-class evaluation infrastructure.

Process evaluations will be systematic and transparent. Program evaluations will begin with documentation of current program design and results including successes and challenges. It is anticipated that researchable issues will emerge that will encompass:

- Program performance and operations
- Quality of installations
- Process time for incentives
- Effectiveness of program marketing
- Collateral and outreach methods
- How program marketing and implementation processes can be revised to optimize cost-effectiveness
- Performance of newly selected implementation contractors
- Satisfaction of participants and other market actors
- Barriers to participation and/or more effective implementation
- Means for overcoming those barriers
- Effectiveness of the program delivery mechanism

It is anticipated that the process of making recommendations related to researchable issues will involve interviews with program staff, customers and market actors. Additionally, the third-party process review will include an evaluation of areas that affect all energy efficiency programs (information technology, marketing and organizational issues).

### 8.1.2. Impact Review

The primary goals of the impact reviews will be to verify and document reported energy and demand savings associated with the programs and to provide additional due diligence to project savings in addition to what is being provided by implementation contractors.

Impact evaluations will be systematic and transparent. The goals of the impact reviews will be to verify gross ex-ante savings and to estimate net savings.



### 8.1.3. Verification of Gross Savings

Verification of gross savings will involve verification that measures are installed and operating as anticipated and a review of the savings algorithms and deemed values used by MidAmerican in determining ex-ante savings. This review will include an estimation of the reasonableness of these calculations relative to calculations used in other programs, a review of inputs (including costs and savings) used in the calculations and verification that these inputs are properly recorded in MidAmerican's tracking systems, and an independent confirmation of savings estimates using simulation modeling. In addition, the impact verification may include a shelf survey to retailers to determine available measure stock and exit interviews with customers of retailers including information about purchases made, choices considered and factors determining choice.

In the case of custom projects, the review should include:

- Review of project description, documentation and specifications
- Review of invoices and dates of completion. In many cases, invoices provide the source of the specification via equipment identification, descriptions and model numbers
- Review of engineering analyses for technical soundness, appropriate baselines and appropriateness for the specific application
- Review of methods for determining demand savings to ensure they are consistent with program and/or utility methods for determining peak load/savings
- Review of input data for appropriate baseline specifications and variables such as weather data, burn hours, total annual hours and consistency with facility operation
- Review of project cost and baseline appropriateness (e.g., should incremental costs and incremental savings versus a competing alternative be used or should the total cost of the measure and savings versus the actual old equipment be evaluated?)
- Phone interview with the customer to verify the measure has been implemented, hours of use, duty cycle, and make and model of the equipment
- Phone interview of the contractor or design professional responsible for the implementation to gather additional project specifics and operating characteristics as needed
- Determination that the measure complies with program rules and is eligible based on payback limits, fuel switching issues, supply side technologies and minimum equipment performance requirements

The results of these analyses will yield realization rates by program and measure within each program that can be used to estimate gross ex-post savings both proactively and on a forward-looking basis.

#### 8.1.4. Timeline

In 2024, MidAmerican will prepare draft evaluation plans for each program in the plan. The impact evaluation methods will conform to the protocols developed under the United States Department of Energy's Uniform Methods Project. The proposed timeline for evaluation activities is summarized in Table 77.

*Table 77 Evaluation, Verification and Measurement Timeline*

Activities	Start Date	End Date
Draft Plan and Request for Proposal	6/1/2024	7/15/2024
Obtain Input from Stakeholders	7/15/2024	8/15/2024
Finalize Plan and Request for Proposal	8/15/2024	9/1/2024
Issue Request for Proposal	9/1/2024	
Contractor Selection	12/1/2024	12/31/2024
Program Evaluations	1/1/2025	12/31/2026
Issue Final Report and Recommendations		3/31/2027

MidAmerican will seek input for the draft evaluation, measurement and verification (EM&V) plans and any Request for Proposal from the Office of Consumer Advocate and other Iowa stakeholders. MidAmerican will provide informational updates throughout the implementation of evaluation plans, contractor selection, scope of work and results. MidAmerican will consult with key stakeholders prior to taking a remedial action such as EM&V contractor dismissal.

MidAmerican will file all final EM&V reports with the Board once generated.

## 8.2. Internal Verification of Projects

MidAmerican will conduct verification activities to ensure that measures have been installed across the energy efficiency portfolio. MidAmerican will verify all projects with incentives over \$20,000, and for all other projects, select a random sample of program participants for verification. Contractors that are new to programs or have had failed past verifications will receive an

oversample of verification visits and these will gradually be reduced (although not eliminated completely) with high compliance rates.

During the site visits, MidAmerican's program contractors verify that the equipment is installed, operating and matches measure characteristics tracked in its Energy Efficiency Management Information System.

### 8.3. Statewide Technical Reference Manual

MidAmerican will continue to support the maintenance and revision of the Iowa Technical Reference Manual (TRM) and support the TRM working group. The TRM is a document that contains a set of savings and incremental cost algorithms, information needed to determine gross energy savings and non-energy benefits associated with the offering of various energy efficiency measures and programs. The TRM is used by all investor-owned utilities (IOUs) offering energy efficiency programs in Iowa.

The TRM is intended to achieve the following objectives:

- Provide a basis for the consistent and reliable estimation of measure-level gross savings for electric and gas programs
- Serve as a common reference document for all IOUs, stakeholders, program implementers and regulators to provide transparency regarding savings assumptions, calculations and sources.
- Serve as a primary calculation document for the statewide Assessment of Energy Efficiency Potential.

The TRM is maintained by a third-party through a joint contract with the Iowa IOUs. The third-party contractor is supported by a standing steering committee with representation from each of the Iowa IOUs and the Office of Consumer Advocate. A larger stakeholder advisory group is organized to provide input in the development process, thus ensuring that the TRM has input and support from a broad stakeholder group.

The TRM is a living document. It is expected that substantial resources will continue to be involved in the maintenance of the TRM.

### 8.4. Collaboration with Stakeholders

MidAmerican intends to continue to participate in the collaborative process established in the last plan. Key collaborative activities will include:

- Fall operations report/review of program changes and updates

- Reporting of impact and spending progress
- Annual report and meeting
- EECR filing
- Collaborative topical meetings as requested.

## 8.5. Reporting

MidAmerican will conduct analyses of its programs and will report annual results to the Iowa Utilities Board. Annual reports will provide the following information:

- Energy and demand electric and gas savings by program and measure within each program on the following bases:
  - Gross ex-ante
  - Gross ex-post (where information is available from impact reviews)
- Comparisons of gross ex-ante savings to plan goals
- Net savings based on the most recent available net-to-gross research
- Estimated program lifetime savings
- Spending by program and measure within each program
- Comparisons of spending to plan goals
- Cost-effectiveness calculations by program based on the Societal Cost, the Total Resource Cost, the Utility, the Ratepayer Impact and the Participant tests
- Load shapes and avoided costs used in the cost effectiveness analyses will be consistent with those used in the development of this Plan
- Measure lives and incremental costs will be consistent with information in the TRM
- Calculations will be conducted on a gross ex-ante basis

MidAmerican will communicate informally with Iowa Utilities Board staff if any changes to the operational details of the programs are needed.